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INSTINCT AND REASON

OR

THE FIRST PRINCIPLES OF HUMAN KNOWLEDGE.

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AUTHOR OF "AN ESSAY ON THE DISTRIBUTION OF WEALTH,"
"PRINCIPLES OF PSYCHOLOGY,"
"A CLASSIFICATION OF THE SCIENCES," ETC.

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INSTINCT.

PART FIRST.

INSTINCT.

CHAPTER I.

OF KNOWLEDGE IN GENERAL.

1. LOCKE has said, "Since the mind in all its thoughts and reasonings hath no other immediate object but its own *Ideas*, which it alone does or can contemplate; it is evident that our knowledge is only conversant about them."¹

2. If this sentence be understood in its obvious meaning, it certainly gives a very inadequate view of human knowledge; for it *seems* to embrace nothing but the knowledge of ideas, or the science of mind,² which, though the most important, is by no means the only department of knowledge with which we are conversant.

¹ Essay concerning Human Understanding. Book IV. chap. 1.

² I here suppose that by *Ideas* Locke meant simply mental phenomena in general, not ideas in that peculiar sense, which has been attributed to him, (especially by Sir William Hamilton), as something immaterial, yet distinct from the mind, and existing even out of consciousness. That Locke did *not* hold that opinion, I have, I think, proved. See Principles of Psychology, supplement to chapter "Of Perception."

3. This much is certain, that nothing is immediately present to the mind but its own Feelings or its own Thoughts,¹ and consequently, that all our knowledge must be either *of* them or *through* them. How it comes to pass that by means of mental phenomena we become acquainted with things totally different, is, no doubt, a great mystery; but, unless we deny the existence of matter, the fact is indisputable.

4. All our knowledge, then, is either *immediate* or *mediate*; either the knowledge of our own feelings and thoughts, or of other things through the medium of these. The importance of PSYCHOLOGY is hence apparent; for mental phenomena are not only interesting in themselves, but they are the channel of communication with every thing else.

5. Since the knowledge of our own feelings and thoughts is alone immediate, we ought to be much better acquainted with them than with other things. And, no doubt, we are in one sense, though, possibly, not in another. We know the particular feelings and thoughts perfectly, as they arise successively in our minds; but we may be very ignorant of their composition, connection, and origin; in other words, we know them practically, but not scientifically. Here, as elsewhere, it is true that what is nearest to us is often least comprehended as a whole. The very interest we take in the particulars, their engrossing nature, clouds our general view. Moreover, it is difficult for the mind, even with intention, to turn round and examine its own phenomena; and the very act of examination may modify them. Lastly, the

¹ See the Author's "Principles of Psychology." Part I., chap. 2.

phenomena are fleeting, and liable to change, and therefore cannot long be examined at one time. For these reasons, Psychology is one of the most difficult of sciences ; though, from our immediate knowledge of the subject thereof, it seems susceptible of a great advance towards perfection.

6. From the above it follows that all men are more or less Psychologists ; they must know something of their own minds, their own feelings, and thoughts, they cannot prevent themselves from so knowing ; for those feelings and thoughts press upon them at every turn. Consequently, the opinions of untutored men in reference to Psychology are entitled to more respect than their opinions on any other subject. In Natural Philosophy, for instance, the views of untaught men are of no value whatever, they are often the very reverse of the truth ; for they judge mostly by appearances, and these are deceitful. Judging by appearances, men long thought that the earth was the centre of the universe, round which the sun, planets, and fixed stars performed a daily revolution. And how could they think otherwise ? To assert the contrary must have seemed at first a violent paradox, in opposition, it might be said, to our very senses. Do we not see the sun rise and set as well as the stars ? It required no little Philosophy to prove that we *see* no such thing ; that we only see phenomena, changing phenomena, from which we *infer* motion of the sun and stars, while we ought to infer from the same phenomena motion of the earth. This one thing is certain, the phenomena admit of two explanations ; and why should untaught men necessarily stumble upon the right ? The senses give us

directly no information with respect to external objects ; they furnish us only with sensations. Of these we cannot doubt, but our inferences therefrom may or may not be correct. It is not then our senses that deceive us, but the thoughts which we build thereupon.

7. Another corollary from the above is, that startling paradoxical opinions on the subject of Psychology ought to be looked upon with peculiar suspicion ; as opposed to the common opinions of mankind on a matter strictly within their competence. Psychological paradoxes are *primâ facie* self-condemned ; and though they may obtain a hearing, they must expect to be silenced at last by the indignant clamour of unlearned metaphysicians. Thus the daring opinions of an ingenious writer of the present day, confounding subject with object, self with non-self, mind with matter, are scouted universally, as opposed to our intimate conviction, which nothing can overthrow or even weaken, that the things thus confounded are really distinct.

8. From what precedes it further appears that all our knowledge begins with that of Self, obtained through consciousness. This is the *fons et origo* of all our acquirements, how various soever they may be ; and this must exist with the knowledge of every thing which is not self, for through self alone can the non-self be reached. Moreover, though the information about other things obtained through consciousness may be very defective or utterly wrong ; yet the *immediate* knowledge which consciousness effects is free from all doubt. To doubt that we think is a contradiction, for the very doubt is itself a thought, and by the very nature of feeling, we

must know whether we feel or not. It is satisfactory to be thus assured that the source and the condition of all our knowledge is itself free from cavil.

9. Before preceeding further it may be well to inquire whether the word *knowledge* admit of any ambiguity, and consequently any explanation. By Locke the term *knowledge* is limited to certainty, and other knowledge commonly so called is designated *probability*. This it must be allowed is an unusual meaning of the word, unwarranted either by popular usage or by philosophical authority, which generally treats of knowledge as either certain or probable. By far the greater part of what we commonly call *knowledge* is of the latter sort. A man of great knowledge means one whose mind is stored with facts, most of which are not of undoubted certainty. At the same time, mere suggestion, mere supposition, are not called knowledge. Unless the probability be in favour of any fact, that term is never applied. When we say, I do not merely think so, *I know it*, we mean that we have, if not a certain, at least a very strong assurance of the truth of the fact, founded on evidence powerful if not demonstrative. Thus, unless we limit with Locke the meaning of the word to *certainty*, it is impossible to say where knowledge begins or ends ; because the degrees of probability are infinite ; and what seems probable to one, and is therefore esteemed knowledge, may seem improbable to another, and consequently no knowledge at all. Even Locke, who restricts knowledge to certainty, is somewhat doubtful whether *sensitive* knowledge, as he calls it, be properly entitled to the name, and he begs it to be admitted under the category, as if by courtesy. We

must not then attempt to fix the boundaries of knowledge very strictly ; just as we cannot always say whether a certain shade of colour be light or dark ; but we must bear in mind that by its very nature knowledge is somewhat indefinite. Strong belief in any event past or present is often called knowledge, though the event may not be true. To knowledge of the future we more seldom pretend, because our belief is less firm ; though Job does say, "I know that my Redeemer liveth, and that he shall stand at the latter day upon the earth."¹

¹ Chap. xix. ver. 25.

CHAPTER II.

OF DIFFERENT KINDS OF KNOWLEDGE.

1. HAVING ascertained the *nature* of Knowledge in general, as well as the case admits, for we have seen that it cannot be strictly defined; and having seen not only that Knowledge *begins* with the feelings and thoughts of our minds, but that these, the latter at least, are an indispensable condition of all knowledge, at all times; we have next to enquire whether there be not different *kinds* thereof. That there are different degrees we have already seen, varying from absolute certainty to a small excess of probability. Certainty admits not of degrees, but the degrees of probability are infinite.

2. Knowledge may be divided into kinds in different ways, upon different principles. First, we may divide it, according to the evidence upon which it rests, into the *certain* and the *probable*, including under the latter a degree of probability which commonly passes for certainty. That the sun will rise to-morrow we cannot

doubt; but according to this division it is an event highly probable only. We must allow it to be *possible* that the sun shall not rise again; and therefore *possibly* not to-morrow.

3. Again, knowledge may be divided into the *original* and the *derivative*, words which sufficiently explain themselves. If we possess any knowledge at all, some portion of it at least must be original, for whatever is derived, is derived from something, and that something, if not itself derived, must be original. If itself derived, it must proceed from something earlier, which is either original or built upon what was original. Therefore, that some portion of our knowledge is original, is a necessary consequence of the admission that we possess any knowledge at all. It is possible that all our knowledge is original; but impossible that all is derivative. To ascertain what knowledge is original and what not, may be a difficult task; but this difficulty does not effect the reality of this distinction. As there can be no reasoning without premises granted, so without primitive knowledge none could be acquired.

4. Lastly, knowledge may be divided into the *instinctive* and the *rational*; according to the source whence it springs, from Instinct or from Reason. As this seems to be the distinction which cuts most deeply into the human mind, we shall adopt it as the ground of our future observations.

CHAPTER III.

OF INSTINCTIVE KNOWLEDGE.

SECTION FIRST.

OF INSTINCTIVE KNOWLEDGE IN GENERAL.

1. Accurately to distinguish the boundaries of Instinct and Reason is no easy task. Popular language, however, and popular opinion, acknowledge the distinction; and these, as we have seen, are not to be despised in questions of mental philosophy. We cannot, indeed, expect any great accuracy in the notions and discourses of daily life; but philosophy without precision is unworthy of the name. Let us then endeavour clearly to distinguish between instinct and reason.

2. Reason is commonly supposed to be that faculty whereby Man is especially distinguished from the lower animals, which are said to be mere creatures of Instinct. Whether this be or be not true, we shall see presently; but were it granted, it still would not tell us what reason and what instinct is, and how they differ. If man alone have

reason, he has instinct also ; so that instinct, at least, is common to him and the rest of the animal creation. Those who consider man as the only rational animal, at the same time allow that he is not all rational, that he has instinct also. This question, then, concerns man as well as the other families of animated nature.

3. The word *instinct* is often applied to the emotions as well as to the intellectual part of our nature. All the primary desires are instincts, that is, they arise without any effort, whether we will or not, by the original constitution of our minds, without meditation, without any view to consequences, without any thought beyond that of the wished-for object. Such are desire of life, of power, of glory, of affection. Such desires may be encouraged or discouraged, they may grow into passions or decline into indolent longings ; but they must exist before they can be cultivated or depressed, before they can rise into dignity or sink into insignificance. They are a part of the original furniture of the mind, furniture that may or may not be polished and adorned, that may get very old, but which never can quite wear out. To these primary desires the term instinct is constantly applied ; as when we talk of the instinct of self-preservation.

4. This use of the word in the case of the emotions may help us to fix the sense of *instinct* when applied to the intellect. Instinctive knowledge, like an instinctive emotion, must, in the first place, be *original*, not derived from previous knowledge ; it must be got without effort, whether we will or not ; without meditation ; without any wish for it ; it must rush into our minds, we know not how ; and must be held to, we cannot tell

why ; it must be firmly relied on, but not *discerned* to be true. Where all these characteristics meet, there is instinctive knowledge.

5. The characteristics of instinctive knowledge may more methodically be summed up thus :—

First,—It must be *original*, not derived from previous knowledge. From this it follows, as a corollary, that it is got without effort, whether we will or not ; without seeking, without meditation ; that it neither demands nor admits of logical proof.

Secondly,—It must be *universal*, held by all men without exception ; even by those who profess to doubt it.

Thirdly,—It must be *irresistible*, proof against all sceptical arguments, though unanswerable.

Fourthly,—It must not be self-evident, like the axioms of mathematics ; in other words it must not be *discerned* to be true. The corollary from this is, that the denial of instinctive truth, however perverse, is still admissible ; for such denial is, strictly speaking, not absurd, that is, not directly opposed to reason.

These four characteristics, with their corollaries, sufficiently determine what is instinctive knowledge.

SECTION SECOND.

OF PERSONAL IDENTITY AND OF MEMORY.

1. Let us now take specimens of such knowledge, and let us see how the above characteristics apply.

2. All our knowledge begins with Consciousness, consciousness of some feeling or thought actually present; and of which, therefore, as we have seen, we cannot doubt. This is the *foundation* of all knowledge, but taken alone, it is not knowledge; for, had our mental life been merely a succession of feelings and thoughts without any conscious connection between them, we should have remained for ever ignorant of all things. Such a supposition is possible; and it is enough to show that the knowledge of SELF is not necessarily involved in consciousness, that we might have had feelings and thoughts innumerable in constant succession, without any acquaintance with SELF. The supposition is tenable because it is not inconsistent, one part does not contradict another; and consequently the knowledge of our Identity is not self-evident or necessary.

3. This, however, must be allowed, that knowledge, properly so called, does necessarily suppose some knowledge of self; for, how could I be said to know anything beyond the feeling or thought of the present moment, unless I myself were somehow known. This knowledge is clearly implied in every other. In this sense, and in this sense alone, we may admit the first proposition of an ingenious writer of the present day, as

contained in his "Theory of Knowing and Being," that "Along with whatever any intelligence knows, it must, as the ground or condition of its knowledge, have some cognisance of *itself*." Yes, along with whatever any intelligence *knows*; but this does not prove that self-knowledge is a necessary article of belief, but only, like memory, necessary to all other knowledge. We might have had a succession of feelings and thoughts, without memory, without a knowledge of self; but such a succession would not be knowledge.

4. The above Proposition, as thus understood, seems to be true, and consequently harmless at least, if not fruitful; but Proposition Second, which the author deduces from the First, is paradoxical in the extreme, being opposed to the universal intuitive reason of mankind. This Proposition contains the whole of his system; and if it be upset, the whole must fall. It is as follows:—"The object of all knowledge, whatever it may be, is always something more than what is naturally or usually regarded as the object. It always is, and must be, the object with the addition of oneself,—object *plus* subject—thing, or thought, *mecum*. Self is an integral and essential part of every object of cognition.

" DEMONSTRATION.

"It has been already established as the condition of all knowledge, that a thing can be known only provided the intelligence which apprehends it knows itself at the same time. But if a thing can be known only provided oneself be known along with it, it follows that the thing (or thought) and oneself *together*, must, in every case, be the

object, the true and complete object of knowledge, in other words, it follows that that which we know always is, and must be, object *plus* subject, object *cum alio*—thing or thought with an addition to it,—which addition is the *me*; Self, therefore, is an integral and essential part of every object of cognition.”¹

5. Now, let us observe, in the first instance, that the author allows in the enunciation of the Proposition that the object of knowledge, *as understood by him*, differs from what is naturally and usually regarded as the object, differs by containing something not commonly comprehended under it. Why, then, it may be asked, do you call it an object? why attach a new meaning to an old and well-understood word? *Your* object, it is allowed, is not the object of other men. Accordingly, in the demonstration we are told that “if a thing can be known only provided oneself be known along with it, it follows that the thing (or thought) and oneself *together* must, in every case, be the object, the true and complete object, of knowledge.” Now this is the very inference which we deny. Self is not, and cannot be, a part of the object, so long as these two are distinguished by all men under heaven. No one can confound the two. The attempt to confound them is an insult to the universal intuitive reason of mankind. The author himself allows that they are “naturally and usually” distinguished. It is, in fact, only by giving a new meaning to the word object, by enlarging it, that the inference can be maintained. Because a thing can be known only provided oneself be

¹ “Theory of Knowing and Being,” by Professor Ferrier. PROPOSITION II.

known along with it, it does not follow that self is an object of knowledge, *as that word is usually understood*. The condition of *all* knowledge is not necessarily an object of knowledge. It may and must co-exist along with the object, but only the slightest reflection, or rather none at all, is required to distinguish them. To say that "Self is an integral and essential part of every object of cognition," is a monstrous paradox, a contradiction in terms, a contradiction to the meaning of the word *object*. Sometimes, indeed, self may be an object to self, as when we reflect on the operations of our own minds; but this very case, by its difference from other cases, proves that self is not always, not necessarily, an object, or a part of an object. In this particular case, and in this alone, self is both subject and object. This Second Proposition, the first inference from the Primary Proposition, contains, as we have said, all that is peculiar to the "Theory of Knowing and Being;" and that inference being shown to be fallacious, the whole system must perish.

6. It thus appears that the startling and paradoxical air which pervades the whole of the "Theory of Knowing and Being," arises from giving a new and enlarged sense to the word *object*, a sense different from the natural or usual, as the author himself allows. But, as the writer cannot get rid of the old sense of the word, he immediately applies to it what holds good of the term in its new signification only; and, so applied, the system becomes paradox and nonsense. If, on the other hand, the new sense be constantly held to, the "Theory" is frivolous, a mere change of nomenclature. Paradox

or insignificance, absurdity or nothing, "choose your horn." I have elsewhere said, "No error is more common in Philosophy than by changing the meaning of a word to arrive at conclusions which wear the air of novelty, while nothing may be really new but the altered signification of a term."

In knowing any thing I cannot but know myself also. True. But that thing is either self or non-self. Let it be non-self, then the knowledge of the non-self is not the same as the knowledge of self; or the object differs from the subject. It is impossible to evade this argument but by denying that there is any thing in the word but self. If a non-self be allowed, the reasoning is irresistible.

7. An acquaintance with the past which we obtain by memory, and an acquaintance with self, are two instinctive and fundamental articles of knowledge, which arise together, and are for ever inseparable. We cannot remember any thing past, that is, in the first instance, some past state of consciousness, and through it some outward event, without knowing, in other words, believing without doubt, that the subject who then was conscious, and he who now remembers, is the SAME, the same, not merely similar, really One and Indivisible. So, we cannot believe in self without the remembrance of something before the present moment, some prior state of consciousness, belonging to that self. "I am the same man as I was yesterday," predicates sameness and supposes memory; "and I remember the events of yesterday," precludes memory and supposes sameness of the subject. Thus knowledge of Personal Identity and knowledge of

the Past are inseparably and necessarily bound up together.

8. These two articles of knowledge, Personal Identity, and some acquaintance with the Past, are fundamental, because they are the ground-work of all other knowledge. It is clearly impossible to know any thing beyond the present moment unless we know that we who now learn and we who formerly learnt are the same ; and it is also impossible to know what we formerly learnt without memory. Consequently, these two articles of knowledge are strictly fundamental.

9. If there be any exception to the above truth it is in the case of *intuitive* knowledge, to be afterwards dwelt upon. When we assent to any self-evident maxim, such as "if equals be added to equals the wholes are equal," or "two straight lines cannot enclose a space;" it may be doubted whether any exercise of memory, any knowledge of self, be necessary. The mind appears to embrace the maxim at once without any reference to the past. This being allowed, it would follow that, strictly speaking, knowledge of self is not indispensable to *all* knowledge, that it does not always even co-exist with the knowledge of an object, much less form a part of that object, as Professor Ferrier maintains.

10. These two co-existent and contemporaneous articles of knowledge are not only fundamental but *instinctive* ; as will readily appear by reference to our Criteria (Section I. 5).

(1.) Knowledge of Self, and its concomitant Memory, are certainly *original*, not derived from any previous knowledge. They are got without effort, whether we

will or not, without seeking, without meditation; they neither demand nor admit of logical proof.

(2.) They are *universal*, held by all men without exception, even by those who profess to doubt them.

(3.) They are *irresistible*, proof against all sceptical arguments, though unanswerable; for such arguments, however puzzling, are not demonstrative. We must yield to demonstration.

(4.) They are not strictly self-evident like the axioms of mathematics, in other words, they are not *discerned* to be true. The contrary supposition involves no contradiction, and is therefore admissible; it is no outrage to reason. Our sameness may be a delusion; memory may deceive us; though we cannot so believe. Reason must allow the supposition to be just possible, but Instinct forbids us to doubt.

SECTION THIRD.

KNOWLEDGE OF MATTER.

1. Next in order to the knowledge of Self, and of past states of Consciousness, may be ranked the knowledge of Matter. Hitherto we have been acquainted only with our own minds, with the present and the past states thereof, and with that something which remains permanent amidst all modifications. So far, all is of a similar nature, all is immaterial, and though at the bottom every

thing is mysterious, and imperfectly comprehensible, yet there appears no *peculiar* mystery in passing from one state of Consciousness to another. My own Being, the only one which I intimately know, is spiritual; there may therefore be other spiritual Beings similar to myself in all respects; there may be other spiritual Beings superior to myself; there may be One Great spiritual Being above all. These inferences are natural, nay, unavoidable. The world of Spirits, then, is the one first open to us, through our own Consciousness, and by inferences therefrom, so far as we are able to make them. It is the first world revealed to us by Instinct, and the last which Reason should give up; for we cannot abandon it without denying ourselves. If we be not spiritual, we are nothing. The world of Spirits, then, is the one of which we have the greatest certainty.

2. But the world of spirits is not all. We are next introduced to a world of a very different sort, not only different, but opposed, the qualities of the one being a negation of the other. The one is material, the other immaterial; that is, the one is extended, solid or impenetrable, or occupying space, moveable, and infinitely divisible; the other unextended, penetrable, or occupying no space, consequently incapable of movement in space, and indivisible.

3. Now, the great question is, how came we to *know* a thing so different from ourselves? This does seem the mystery of mysteries; and so it has appeared to thoughtful men; for, while by some, theories have been formed to lessen the difficulty; by others, the existence of matter has been called in question or even flatly denied. Re-

ferring to another work¹ for an account of the various theories framed to meet the difficulty, by softening down the distinction between Mind and Matter, by materializing mind, or by immaterializing matter, or by interposing Deity, theories which complicate the mystery without removing it, we shall be content here to refer to those who profess to doubt or to disbelieve the existence of the material world.

4. Considering the wide and deep distinction between Mind and Matter, the awful gulph which lies between them, and hence the impossibility of an *immediate knowledge* of the latter; these doubts seem at first not unreasonable. As soon as we begin to think upon the subject at all, we must see that all we know *immediately* is some state of our own Minds; and how, from such a state, we *get at* something else utterly opposed in nature, does seem *peculiarly* incomprehensible. In vain do we attempt to throw a bridge over the chasm by means of *sensible species* or *Ideas*, whether those ideas pass directly from the object to us, or through the medium of the divine Mind; we must at last leap the gulph which we had laboured to cross with ease. A very ingenious author of the present day, already alluded to, has endeavoured to get over the abyss by filling it up, by effacing the distinction between Mind and Matter, but the ravine was too broad and too deep.

5. But why must we leap the chasm which we cannot otherwise cross? Why not remain on this side and refuse to trust ourselves to an unknown land, beset with

¹ See the Author's "Principles of Psychology." Part III., chap. III., Sect. 3, Of Perception.

clouds and thick darkness? Here, all is comparatively clear, there, all is mysterious, unlike to any thing which we intimately know. Myself I know, my thoughts and feelings I know; but what is that which neither thinks nor feels? Why believe in something *without*, which contradicts all *within*? Surely this is too great a call on my credulity. A Spirit I am, and, without some powerful reason to the contrary, I will believe only in the world of spirits.

6. But *can* you believe only in the world of spirits? That I deny. Do what you will, strive against the belief with all your power, fortify your doubts by every conceivable argument, still the belief cannot really be shaken, certainty cannot be overthrown. You may assume a philosophic air, you may pride yourself on your superiority to vulgar prejudices, you may laugh at the credulity of the common herd; but all this is mere pretence, a sham, a robe of state to cover a common garment. It is fine cambric concealing coarse linen. The fine cambric may be worn on days of ceremony, but the common linen cannot be dispensed with. The one is too frail for ordinary use, too cold for every day life; it is but an ornament, a badge, to distinguish the wearer from the multitude.

7. And what prevents me from doubting or disbelieving the existence of the material world, which you allow is so foreign to my nature, so remote from Self? to this there is but one answer, Instinct, Instinct, Instinct. A famous school of philosophy, the Scottish, has founded our belief in matter on *common sense*; but, in no signification that these words will bear, can this explanation or justification of the Belief be admitted. The word

sense cannot here be used in its proper meaning, it must signify intellect in some form, not sensation. If it imply reason, then common sense will be that degree of reason which is common to all reasonable beings. But belief in the material world is not founded on reason, nor can it be justified thereby; for it is held by the lowest animals which have never been allowed to possess reason; and reason can never show why the mental affections which I experience prove the existence of something totally different. To introduce reason, then, as at first a cause, and afterwards a justification of the belief, shows a total misconception of the subject. The Belief in question is not reasonable, but instinctive, and it has all the characteristics thereof.

8. *First*, this belief, and the knowledge therein implied, is *original*, not derived from previous knowledge; it is got without effort, whether we will or not, without seeking, without meditation; it neither demands nor admits of logical proof.

Secondly, it is certainly *universal*, held by all men, even by those philosophers who profess to doubt, nay, by all animals without exception.

Thirdly, it is *irresistible*, proof against all sceptical arguments, though unanswerable; arguments, however, that are not demonstrative, and which, therefore, may be fallacious.

Fourthly, it is not self-evident, not necessary, not *discerned* to be true; and, therefore, it may be disputed without absurdity.

This article of knowledge differs from Self knowledge in this, that the latter is essential to *all* knowledge,

whereas the former is essential only to a knowledge of Matter and to physical science.

If the above statement be correct, if the belief in matter be founded on an Instinct universal and irresistible, it necessarily follows that all expressed doubt thereof is merely verbal or nominal, not mental or real. Why then waste words, why endeavour to expel what has no hold in the breast? Why attempt to prove what no one really questions? A *bonâ fide* doubt we may meet, but a nominal doubt we should utterly disregard. The belief in the material world, like all instinctive beliefs, neither demands nor admits of logical proof; and to require such is at variance with that First Philosophy, which shows us the foundation of human knowledge, and the evidence proper to each department. Instinct is as imperative as Reason; we can no more resist the one than the other, though they act upon the mind differently. *Philosophia prima*, the first philosophy, shows us that to doubt the evidence of instinct, is not, indeed, absurd, but impossible; and if it is impossible, we must submit, though in words we seem to rebel. Better then is it, and more philosophic, openly to yield to our nature, than to do violence to our convictions, and glory in our scepticism at the expense of our sincerity. We believe, then, in the existence of the material world, we cannot help believing in it; and it is mere philosophical trifling to call in question what we never can really doubt. True, as this belief is not founded on reason, reason must allow that it *may* be groundless, but this thought can shake our conviction hardly for a passing moment.

SECTION FOURTH.

KNOWLEDGE OF UNIFORMITY IN NATURE.

1. Our knowledge of the material world could serve us but little, were we not, at the same time, impressed with the Belief of some uniformity in nature, that things which have once been conjoined, in space or in time, will be found conjoined again and again.

2. This Belief, though truly instinctive, differs from the former in this respect, that it requires some experience for its development; for, unless we have seen one instance, at least, of such conjunction of phenomena, in space or in time, we cannot possibly expect another. This expectation, then, is an inference from Experience in each particular case; but the *tendency* to draw such inferences is an Instinct of our nature, ready to show itself on the first occasion. It cannot be maintained that we are sufficiently acquainted with the nature of things to be able to show any reason for such uniform conjunction, whether of co-existence or of succession, whether in space or in time; and children believe in uniform conjunction even from their earliest years. For ought we can see to the contrary, nature might have been a chaos, and the events of one day totally different from those of another. The ready tendency to believe in uniformity is shewn by this, that one instance of conjunction is enough. The child who has burnt his fingers once, will be more cautious about fire another time. We are, in fact, credulous in the extreme, and

believe many conjunctions to be invariable, which are only casual. This is a main and deep-seated source of error.

3. Sometimes Instinctive Knowledge is supposed where there is really none. Thus, because some animals avoid food injurious to them, wild plants, for instance, prior to all experience of their effects, they are said to avoid them by Instinct. But we cannot suppose it is from any foreknowledge of the effects that those animals shun them, but merely from something disagreeable in the smell or taste. On the other hand, Knowledge is often attributed to Experience, while Experience was only the spark that set the train on fire. A match from the lantern of Guy Fawkes might have sent the Houses of Parliament into the air, but the gunpowder must first have been compounded and set in order. So, had there not been an instinctive tendency to believe in uniformity, Experience would have been in vain.

4. The word *Experience* is in everybody's mouth; and it admits of great latitude of meaning. Strictly speaking, our experience is limited to the phenomena of our own minds, for these alone we know immediately, intimately, thoroughly. Hence, by an extension of meaning, we are said to have experience of things outward, which we actually *perceive*, or have *perceived*, that is of particular bodies, or particular changes in bodies, presented to the senses; though such knowledge be not immediate, but obtained through certain phenomena of mind, by inference either instinctive or rational. By a farther extension of the term, a man of Experience comes to mean one who has not only *perceived* much and accurately,

but who has drawn many general conclusions from his perceptions. In Philosophy, the term Experience ought, certainly, to be limited to the first two senses, if not to the first alone; and in neither of these senses can the inference of permanent uniformity, which we draw from a particular instance of conjunction in space or in time, be attributed to Experience. Neither can it be ascribed to Reason; for why should nature be uniform; why might it not be a chaos? Can we pretend to know enough of the secrets of things to affirm the absurdity of the latter proposition. And if the inference be owing neither to Experience nor to Reason, it must be attributed to Instinct.

5. That the instinct in question often leads us astray, that it often conjoins things permanently which have only been united casually, is not disputed. Here, then, is the use of Experience. It serves either to correct or to confirm the Instinct. When our expectations have been deceived, when phenomena once conjoined are found together no longer, we of course must give up our belief in the particular uniformity, and this correction may be attributed to Experience. On the other hand, when we have found the same phenomena conjoined again and again, Instinct is fortified, and Belief confirmed. Repetition has a power of its own, it strengthens, but does not originate. A habit must begin in something which is not habit, but natural tendency; and so, Repetition fortifies the tendency to believe in uniformity, supposing such tendency already to exist.

6. Belief of uniformity in nature being not only highly important, but even indispensable to our existence, we

cannot suppose that its origin should have been left to the slow growth of Reason. But for this belief, the child, with all the care of his nurse and parents, never could have attained the age of manhood, never could have reached that age when Reason is developed. It was then necessary for the continuance of the species that this knowledge should be instinctive.

7. Does, then, this knowledge possess the characteristics of Instinct? *First*, this Belief and the Knowledge therein implied certainly arises after a single instance of conjunction of phenomena; and though this instance be matter of *Experience*, yet the Belief in the constant recurrence of such conjunction is *Original*, not derived from previous knowledge; it is got without effort, whether we will or not, without seeking, without meditation; it neither demands nor admits of logical proof. Were it true, as Hume supposes, that several instances of conjunction were necessary to create the Belief in future unvaried uniformity, still such belief could by no means be attributed to Reason; for Reason can see no connection between past uniformity, however frequent, and constant uniformity in time to come; and, consequently, some other principle, as Custom, must be called in to solve the difficulty. On this supposition, the Belief in question would be the result merely of Custom or constant association. But we have seen that one instance alone of conjunction suffices to create the Belief; and, therefore, neither Custom nor Reason can explain the mystery.

8. *Secondly*, Belief in certain uniformities in nature is *universal*, held by all men, even by those whose rea-

son is subverted, and by all animals. It is a remarkable corroboration of our doctrine, that Belief in the material world, and in the uniformity of nature, clings close even to those unhappy persons whose reason is clouded or extinguished. Persons in this situation are often quite able to take care of themselves so far as to avoid any obstacle or imminent danger ; and those who do destroy themselves, do so *intentionally*, proving by this very act that they know the common effects of common things. Nothing can show more clearly the distinction between Instinct and Reason. Of this distinction I have myself been a melancholy witness.

9. *Thirdly*, the Belief in uniformity is in many cases *irresistible*, irresistible as well as *instantaneous* upon the phenomena.

10. *Fourthly*, this Belief is not self-evident, not necessary, the fact is not *discerned* to be true ; and therefore it may be called in question without absurdity. No one can rightly affirm that it is absurd to say that the course of nature may change. Thus, Belief of uniformity in nature has all the characteristics of Instinctive Knowledge.

11. This Belief is the foundation of all Science, that is of all general knowledge ; for science deals not in particulars, like Civil History, and Topography, but in general facts ; and, without the Belief of uniformity in the constitution and course of nature, all Knowledge would be particular, there could be no general results. Simple observation upon passing events would still give us information, but this information would be of no use, for it could tell nothing as to the future. It is the

Mind, by an original and untaught power, which turns this information to account, that adds to the phenomena something entirely its own, something entirely distinct from sensation, distinct from perception, which believes, and cannot help believing, that the future will always be like the past. Thus, particular and barren information becomes general and useful knowledge; observations once made are available for ever; Experience becomes the guide of life; and Observation with experiments raises up a body of science, to delight, adorn, and benefit mankind. We may say, then, with truth, that all useful knowledge with respect to matters of fact rests ultimately upon Faith, a Belief for which we can assign no reason.

SECTION FIFTH.

KNOWLEDGE OF OUR OWN FREE WILL.

1. Closely connected with the knowledge of our Personal Identity is that of our own Free Will, which is really a part of the Knowledge of Self. We cannot know ourselves at all without knowing that we are free agents, at least without the firm belief that we are such, which may well be called Knowledge, as much as our belief in the existence of the material world, and our belief in the uniformity of nature.

2. In the material world we believe that every change may be traced to some antecedent change as its cause,

and having once found that cause we believe that it will always be followed by the same effect, if no other cause intervene. Hence the anticipations of physical science are in numberless cases confident in the extreme. Every almanack is full of such anticipations, and they are always verified, generally with the nicest exactness. Not so in the case of human agency. We may guess, we may conjecture, we may even infer with much probability, how a person in a certain situation will act, but we never can be quite sure. Nay we never can predict with certainty how we ourselves shall act on any occasion. Whence this difference between the anticipations of Physical and of Moral Science? The difference depends on this, that we believe ourselves and all other men to be endowed with a power of *originating* change, a power therefore which may baffle all our attempts at calculation founded on the causes which most commonly act upon the Will. The nice and endless differences of individuals, the whim, the caprice of the moment, never can be calculated; the power of originating never can be brought under the exact uniformity of a Law of Causation; Mind can never be assimilated to Matter. Matter originates nothing, at least so we implicitly believe; it only continues and propagates change everlastingly; but Mind *begins* motion and mental changes; and this power is so wound up with our notion of Mind, that we cannot, if we would, separate the one from the other.

3. That we all firmly believe ourselves and all other men to have Free Will, to be endowed with a power of originating, not to be mere links in the chain of cause and effect, or simple instruments in the hands of a supe-

rior power, is proved by the facts of CONSCIENCE in our own case, and by the sentiments wherewith we regard the actions of others. Conscience, indeed, is not what some represent it, an infallible monitor and instructor, informing us of what is right and wrong in every case, a supreme judge or arbiter from whom there is no appeal ; for, it is unquestionable that some, like Ravaiillac, and I may add Calvin, have done atrocious acts with the full approbation of Conscience, glorying in the deed, while many others have treated and do still treat their enslaved fellow-creatures worse than the brutes, without compunction. But when we ourselves have done what we already know, or at least fully believe to be right or wrong, there is that within us which always creates self-satisfaction or dissatisfaction on the retrospect, and this is Conscience, not an infallible instructor or guide, but a never-failing sanction of morality, tending to keep our acts in accordance with our notions, perfect or imperfect, of Duty. In like manner, when we review the actions of others we feel approbation or disapprobation, we praise or blame. Now what can Conscience, what can approbation or disapprobation, praise or blame, mean, if men have no Free Will ? They certainly imply belief that we can do or not do as we please, that in a certain case we might have acted otherwise, that we are something more than constituted parts of a machine, something more than levers, wheels, axles, or hydraulic rams, that we have the god-like power of originating change. And as Conscience in our own case, approbation or disapprobation, praise or blame, in that of others, are facts notorious as the sun,

extensive as the human race, so also must be the belief in the free agency of man.

4. That the doctrine of Free Will is liable to great difficulties, is not disputed, but for our present purpose these difficulties are unimportant, if they do not interfere with the universal Belief of mankind. That is the only point which we are at present concerned to establish. For answers to these objections, sufficient, I think, though of course not demonstrative, I must refer to the chapter on the Will in my Principles of Psychology. There the subject is discussed in full. Our only object here is to note and confirm the fact of the universality of the Belief in our free agency, for this is required to prove the Instinctive Nature of that Belief. The question then now is, do the above difficulties really destroy the Catholic character of the doctrine?

5. That the freedom of Man's Will has been often disputed among philosophers, and that some have maintained the opposite doctrine of Necessity, there is no doubt; but the existence of the material world has also been doubted and even denied; and yet we must allow that scepticism on this point does not in the least interfere with the real universality of the Belief. The amount of Belief bears to that of doubt an infinite ratio, as one to zero. Moreover, we are certain as to the Belief, but we never can be sure of the reality of the doubt; for we know well that opinions are often broached by philosophers more from a love of singularity, a desire of distinction, a contempt of the vulgar, than from conviction. It is natural for those, "who cannot add anything to *Truth*, to seek for eminence through the heresies of

paradox." And they often succeed, for men are caught by the new and the startling, while they turn with indifference from the old and the true. We may well doubt whether all the excellence of the *Recherche de la vérité* would have obtained for Malebranche a due reward of renown, had it not contained the astonishing theory of seeing all things in God; or whether all the acuteness and all the charm of Berkeley would have gained for him a never-dying celebrity, had he not denied the outward existence of Matter. So, Hume rose into notoriety by denying that miracles ever could be credible.

Besides, those very philosophers, even the most sceptical, talk and act, and seem to think, on all ordinary occasions, just like other men. When they quit their closet they leave their doubts behind them. What patron of Necessity ever expressed himself in practical cases of morality differently from other people? Who ever ceased to feel approbation or disapprobation, or to assign praise or blame to certain actions, because he denied freedom to the Will? Thus, professed doctrine and conduct were in open contradiction, Philosophy and Nature, Reason and Instinct constantly opposed. Nay, an eminent metaphysician, who has lately propounded a startling theory, maintains that Philosophy ought not to leave the closet, that it is for private meditation only, not for the world at large, for speculation not for use, and that out of his *sanctum* the philosopher is a pedant and a bore. He must pass his speculative life in a world of his own—a world of enchantment no doubt; for woe to him if he carry his illusions abroad. He will be gazed and

laughed at if he merely enounce his opinions, but if he act upon them, he will be clapped into Bedlam. Or, he will have the fate of Alnaschar, who, lost in reverie, kicked all his glass and crockery into the street.

6. What seems a more weighty objection to the doctrine of the universality of the belief in Free Will, is the fact that certain religious sects, and even whole nations, have adopted a contrary opinion. Thus, while the Sadducees, according to Josephus,¹ held the doctrine of Free Will in all its integrity, the Pharisees combined it with a belief in destiny; and other sects, as the rigid Calvinists, and even a whole people, as the Turks, maintain the doctrine of Fatalism. In these instances, we see, to a remarkable extent, the effect of reason, right or wrong, in overcoming instinct, so far as to establish an opinion in direct contradiction to the latter; but it is only an opinion, and an opinion inconsistent with every-day sentiment, speech, and action; for, what individual, what sect, what nation, because they believed in predestination, ever ceased to feel, speak, and act like other people? Could a few instances be produced of individuals who, in some period of unusual excitement, have stifled the instincts of nature in obedience to a favourite theory, these instances must be regarded as extraordinary phenomena, occasioned by extraordinary causes, forming no exception worth speaking of to the countless sum of contrary facts. The power of Instinct is eminently shown in this, that it acts even when the Reason is convinced to the contrary, that it triumphs over false theories, and though it cannot stop speculation, renders it utterly at

¹ Wars of the Jews, Book II. chap. 12.

variance with practice. Are rigid Calvinists, are Turks, free from the stings of conscience because they believe in predestination? Do they feel, do they express no indignation against the betrayer or the oppressor? Do they cease to believe themselves accountable for their words and actions? If not, then their whole moral life is at war with their reason.

7. That certain individuals, and even sects, should endeavour to persuade themselves, in opposition to Instinct, that the Will is not free, and that man is subject to Necessity or Fate, is not surprising. How agreeable to the natural depravity of human nature to suppose that we are not accountable for our actions! how pleasant to think that we are predestined to everlasting happiness! how gratifying to believe that we are the especial favourites of Heaven! What can feed pride more than the latter supposition? It is not our real deserts that minister to pride so much as our supposed advantages over others, even those of a frivolous nature. Real merit is its own reward; it gives that inward and heartfelt satisfaction which requires no fictitious support; while doubtful and petty superiority needs to be propped up by pride. Thus, virtuous actions do not make men arrogant; but belief in the favour of heaven, independently of our own doings, engenders spiritual pride, the bane of true religion. To be the predestined favourite of heaven is of course a great superiority, but it can always be questioned by others, and must at times seem doubtful even to the individual. Therefore it must be openly assumed and dwelt upon in order to impose upon the world as well as upon self. The Jews looked upon them-

selves as the chosen people of God, and nothing could be more mortifying to them than the doctrine of Christianity, which put all mankind upon an equality. No wonder then that they shut their ears to the truth of the gospel, and even persecuted to the death those who maintained that there was no longer any distinction between Jew and Gentile.

8. The universality of the belief in the free and therefore accountable agency of man is proved by the language of all people in all ages. All languages abound in words of praise and blame, proving belief in merit and demerit, and consequently in free-will, for, take away free-will, and praise and blame are utterly misapplied. To this it may be replied, that though there be no such thing in reality as merit and demerit, yet praise and blame have their use by acting as motives to the Will, encouraging useful and discouraging noxious actions. No doubt such is the final cause or purpose of Moral Sentiment; but to deny the existence of merit and demerit is to belie the universal sentiment of mankind, (against which in morals it is vain to appeal,) and to suppose that we are the fools and dupes of nature, which has made us such that we can no more get rid of the notion of merit and demerit, than we can change our skin. "These sentiments are so rooted in our constitution and temper that, without entirely confounding the human mind by disease or madness, it is impossible to extirpate and destroy them."¹ Praise and blame serve, no doubt, a great moral purpose, they are useful in the highest degree; but without the belief in merit and

¹ Hume, "Treatise of Human Nature," Book III., Sect. 2.

demerit, and consequently in free agency, we could neither praise nor blame.

9. It must then be allowed, after a due consideration of all objections, that no amount of real disbelief in the Free Will of man exists, worthy to be set against the overwhelming sum of belief, so as to make any material deduction from the latter. Therefore, one characteristic of Instinctive Knowledge, *universality*, belongs to the belief in the free agency of man.

Secondly, This belief is certainly *irresistible*; for we have seen that it is proof against all arguments addressed to the reason, how ingenious, how powerful soever they may be. These arguments, though never demonstrative, may stagger us; they may be difficult to answer; they may make converts to a philosophical tenet, but they have little or no influence on our moral sentiments and actions; and, therefore, we may infer that they do not really convince. They may please a speculative mind; they may gratify a love of singularity and notoriety; they may raise up a philosophical master and give a name to his disciples; but they must bow to the power of Nature; and Reason in all its pride, with all its wiles, must yield to the simplicity of Instinct.

Thirdly, Belief in our Freedom of Will is assuredly *original*, not derived from any previous knowledge, neither learnt by experience, nor inferred by reason, not developed by years, but as strong in infancy as in age. All that reason has done is to endeavour to shake the belief; and this endeavour has signally failed, even with those who maintained the adverse opinion. Their sen-

timents, words, and actions, at every moment belied their speculative dogma.

Fourthly, The belief in question is not self-evident to reason, not necessary, not *discerned* to be true; and, therefore, it may be, and often has been, called in question, not only without absurdity, but even with much show of plausible argument.

Thus, Belief in the Free Will of man has all the characteristics of Instinctive Knowledge.

10. As knowledge of Self and trust in Memory are the foundation of all knowledge, faith in the uniformity of nature the base of all science, and belief in the material universe the ground of all physical science, so the certainty of Free Will lies at the bottom of all morality. All ethics suppose men to be free; that he can do or not do certain actions at his good pleasure, *proprio motu*, without being subject to any inexorable law; that certain acts have *therefore* merit or demerit, are virtuous or vicious, worthy of praise or blame; that consequently men ought to be rewarded for the one, punished for the other. These sentiments are indisputable and universal. The acts deemed virtuous or vicious may vary a little in different ages and countries, that is, the object of the sentiment may vary, but the sentiment is everywhere to be found. Now, do away with man's Free Will, and the sentiment is nonsense. To award praise or blame to one who cannot regulate his own actions is simply absurd. Freedom of the Will is then the foundation of ethics.

11. Accordingly, those who upset the liberty of man have demolished ethics along with it. Thus Hobbes, the necessitarian pure, the nominalist *par excellence*,

boldly affirms that *might* is *right*, which means that morality, properly and usually so called, is a delusion or a sham. Hobbes cannot be said to have any system of ethics, but only a system of policy, and his policy annihilates ethics. Yet even he is constrained to write like other people, whenever his theory is not actually before him, nor could he have done otherwise without creating a language for himself. It is impossible to talk of men and their actions without using words which imply merit or demerit, or express praise or blame, not a mere intellectual decision as to the tendency of these actions. It has been well said by Bentham, "right or wrong, in a good cause, or in a bad, nothing is so rare as consistency." Having annihilated ethics, it might naturally be supposed, and it has been supposed, that Hobbes has demolished religion along with them. But this would be a rash conclusion. One half of the *Leviathan* is taken up with Christian politics and the Christian religion, nor does there seem to be any reason to doubt the sincerity of the author, except that his other opinions seem inconsistent with religious belief; but according to the *dictum* of Bentham this is no sure ground of inference. Hobbes was an immoral Theist, not an Atheist; and he may have been even a Christian. Certainly, one half of his great work is taken up with fixing the principles of Christianity, and the respectful terms in which he uniformly mentions the Holy Scriptures are a better proof of his faith than any argument drawn from his inconsistency is of the contrary. Hobbes was a bold man in the expression of his opinions, he promulgated the most startling doctrines without reserve or limitation; in *Metaphysics* the

doctrine of necessity, in Morals that of might as the foundation of right, in Politics the unlimited power of one as the best possible government ; can we therefore suppose that he would have concealed his religious opinions, had they been hostile to Christianity ; nay, that he would have devoted one half of his Leviathan to the exposition of its principles ? But so it is ; opinions are often attributed to men, not that they have actually maintained them, but because they are supposed to be legitimate conclusions from other opinions which they are known to hold. The reader will pardon this digression, for it seemed of some importance to show that irreligious opinions had been erroneously attributed to Hobbes, and that so deep a thinker was no disbeliever in Christianity.

SECTION SIXTH.

BELIEF IN HUMAN TESTIMONY.

1. The last original source of knowledge to be here mentioned is that of Belief in Human Testimony. This knowledge differs from the foregoing inasmuch as it comes to us second-hand, through others, and not by the native powers of our own mind, unlike the knowledge of self, of facts remembered, of the material universe, of uniformity in nature, and of our own Free Will. For these we require no voucher, no confirmation by others ; our own mind gives us all the certainty we can desire. But

the present belief, from its very nature, hangs upon others, and without others can have no existence.

2. Though the knowledge thus obtained may be said to be not indigenous but of foreign growth, not original, but derived, yet the tendency to believe, on which it is founded, is truly instinctive.

First, this tendency is certainly *original*, not derived from any previous knowledge, not the result of experience, for the child at first believes implicitly, without hesitation, whatever he is told. Doubt in testimony, on the contrary, is of slow growth, feeble at the commencement, easily crushed, but gradually strengthening as experience proves that men do not always speak the truth, either through ignorance or design.

Secondly, Belief in Human Testimony is in early childhood universal, for no one can point out a child who began by doubting what was told him. Credulity is the never failing accompaniment of our tender years.

Thirdly, this Belief is at first *irresistible* as well as *instantaneous*. The child cannot help believing what his parents or his nurse may tell him, and that too at the moment, without demur, without hesitation.

Lastly, this Belief is not self-evident, not necessary, not *discerned* to be well founded, and therefore it may be, and as we get older, very frequently is called in question, without absurdity. Consequently, Belief in Human Testimony has all the characteristics of Instinct.

3. And this Instinct is necessary to the well-being, nay, to the preservation of the human race. As a long time must elapse before the child can judge for himself, it is essential that he place entire reliance on all that is

told him ; for though this may not always be true, yet it is generally intended for his benefit, and some guidance must be better than none. What would become of human life if Doubt, not Belief, were the first law of our nature ? All early education is built upon an unreasoning Belief or Faith in the pupil, for Reason is not yet sufficiently awake to distinguish the true from the false ; so that, without Faith, education could do nothing. Thus, no doubt, error may be inculcated, and prejudice, at all events, there must be ; but prejudice and even error are preferable to a total blank, and to the absence of all rules of life. Education always aims at what is good, and teaches what is believed to be true ; and that it does not always achieve good, or propagate truth, is the result of our fallible nature. What would a child be without prejudice ? His intellect would be stunted, his moral nature depraved, from a want of some food for the understanding, of some guide to the emotions. Even a man without prejudice, that is, without some blind partiality for certain opinions and persons, will be a heartless individual, without warmth, without sincerity, without energy. “*Savez-vous,*” dit M. de Talleyrand, “*pourquoi j’aime assez Montrond ? c’est parce qu’il a peu de préjugés.*” “*Savez-vous,*” dit M. de Montrond, “*pourquoi j’aime M. de Talleyrand ? c’est parce qu’il n’en a point du tout.*” Just so ; Talleyrand was a specimen of a man without prejudice, attached to nothing but his own interest. What is called national sentiment must in the majority be a prejudice, or rather an assemblage of prejudices ; but without such a sentiment, there may be a collection of individuals, but there is no nation. Loyalty is a pre-

judice in favour of a particular family; but in a monarchy, how important, how salutary is that prejudice! What a bar to rivalry and civil war! What a source of security! The politically degraded are unprejudiced enough, they care only for him, be he Bourbon or Bonaparte, who will ennoble or enrich them; they hoist, as it suits their turn, the white flag, the tricolor, or the red; yet they still may have some national sentiment. In the last stage of degradation this also disappears, and each man sees clearly, and cares not to conceal, the vices and misery of his own countrymen.

4. These then are the six grand articles of Belief, to be attributed to Instinct not to Reason, which are before all the lessons of Experience, though some of them may subsequently be confirmed or modified thereby; which themselves form the most important part of our knowledge, and are indispensable to all future progress; which precede and prepare the growth of Reason, the other grand source of Knowledge, and afterwards, in conjunction with Reason, enable the now mature mind to profit by Experience. For it is notorious that many, even of full age, profit little by Experience, because they do not reflect. Experience alone is of no avail, it is the mind which supplies what is wanting to make Experience fruitful, either by means of some instinctive belief, or some exercise of Reason. Thus, in reality, Instinct and Reason are the only sources of Knowledge. The sources of Knowledge must be in the Mind itself.

PART SECOND.

REASON.

CHAPTER I.

OF RATIONAL KNOWLEDGE IN GENERAL.

1. IN the second chapter of the former part of this work, we divided Knowledge into the Instinctive and the Rational; and, accordingly, the first part has been given up to the consideration of INSTINCT, one of the two grand sources of all knowledge. We have now to treat of the other source, of REASON, that divine emanation whereby man rises far above all the rest of the animal creation, by superiority in degree, if not by exclusive possession; a superiority so great as to establish him as it were God of this lower world, as much raised above the brutes as he is below his Great Creator. That man can rise to the conception of one Great Being, Maker of Heaven and Earth, and of all that therein is, is itself the greatest proof of his superiority, the indisputable evidence of his own grandeur, in the midst of all his misery and littleness. This magnificent conception the Atheist treats as a delusion; he plumes himself on his

positive knowledge, much of which is merely instinctive, and rejects the grandest fact which reason has made known to us, showing thus a perversion of Intellect as well as a poverty of Soul.'

2. At the opening of his Chapter "Of Reason," Locke makes the following statement: "The word *Reason*, in the English language, has different significations; sometimes it is taken for true and clear principles,—sometimes for clear and fair deductions from those principles,—and sometimes for the cause, and particularly for the final cause. But the consideration I shall have of it here is in a signification different from all these; and that is, as it stands for a Faculty in man, that faculty whereby man is supposed to be distinguished from beasts, and wherein it is evident he much surpasses them."¹

3. The nature of this faculty it is now our task to determine. Throughout the chapter, of which the above sentence is the commencement, Reason is constantly taken to be synonymous with reasoning, or nearly in the second sense above stated. It is clear, therefore, that Locke does not accomplish what he promised, that he fixes no meaning to the term different from those meanings before enumerated, that he tells us not what Reason is but Reasoning. This is particularly clear from Sect. 17. of the above chapter, where *Intuitive* is distinguished from *Rational* Knowledge. Now Reasoning is a part, or rather one of the functions of Reason, but not the whole; and, therefore, an account of the one cannot serve for the other.

4. Since Reasoning is universally allowed to belong

¹ Essay concerning Human Understanding, Book IV. chap. 17.

to Reason, and is properly the most complex form thereof, by examining the nature of Reasoning, and by eliminating what is peculiar to it, we may rise to the conception of Reason in general. Now, in all Reasoning, of whatever kind it may be, some connection is seen between one proposition and another, so that if the one be true, the other will be true also, or false, true or false, certainly or probably, as the case may be. Such is the essence of all Reasoning; two Propositions at least, mentally comprehended, if not stated in words, and a seen connection between them, so that the one establishes or upsets the other. But how do we see the connection? How? That is a question to which no one can give an answer, for it admits of none. The understanding must begin somewhere, must have a native force, a power of distinguishing one thing from another, of discerning incompatibilities, or it never could acquire any knowledge. All teaching supposes a mind already capable of learning, endued with an original energy; and we could as well teach a blind man to distinguish colours, as a man without Reason to reason. The proper name for this mental clear-sightedness is *Intuition*. In all reasoning then we have the comprehension of two propositions at least, and intuition of a relation between them.

5. But Intuition is not confined to the discerning of relation between one proposition and another; it also sees at once a relation, whether of agreement or disagreement, between one Notion and another, and so between the Things made known to us through our notions. Thus does the mind see intuitively that Subject and Object,

Self and Non-self, the Material and the Immaterial, are different. Whatever may be the principles or causes of Mental Phenomena, we cannot confound thought and emotion with a thing extended and solid. So, we must allow that the notion of two straight lines is incompatible with that of space enclosed, for which three, at least, are indispensable. These and innumerable other agreements and disagreements we see at once, intuitively, by Reason, but without reasoning.

6. From the foregoing scrutiny it appears, that Intuition is the faculty of discerning agreement or disagreement between *notions* or *conceptions* and so between *things* conceived, as well as between propositions expressive of the *relations* of notions or of things; and this Intuition is the very essence of Reason.

7. But to this Intuition two other faculties are subsidiary, the faculty of Conception, and that of Comprehension. It is evident, that, without clear conceptions we cannot discern at once the agreement or disagreement of one conception, or of one thing conceived, with another; and without distinctly comprehending the meaning of a proposition, we cannot see whether it be true or false, and whether it agree with another or not. Now the faculty of Conception, though subsidiary and indispensable to Reason, may exist without it, and actually does exist without it, in the insane and the fatuous; but Comprehension of a relation, or the understanding of the words in which it is expressed, as embracing a certain knowledge of Relation, must be attributed to Reason. That we can comprehend a proposition or understand its meaning without forming any

decision as to its truth or falsehood, is evident from this, that we may understand all the enunciations of Euclid, before we study the proof. Thus I can comprehend that the three angles of every triangle may be equal to two right angles, whether I *know* them to be so or not.¹

7. This only must be noted, it is only where propositions not self-evident are concerned, that Comprehension can be distinguished from Intuition as to truth or falsehood; where propositions are self-evident, the two are inseparably blended. Thus, if I understand the proposition, "two straight lines cannot enclose a space," I must also see that it is true; but I may comprehend the enunciation, "in every right angled triangle, the square of the side opposite to the right angle is equal to the squares of the two containing sides," without being convinced of its certainty. So, if I am told that the Nile is larger than the Danube, I can perfectly comprehend the assertion, though I know not whether it be well founded. Thus, comprehension of relation, and intuition as to agreement or disagreement, whether of notion with notion, of things with things, or of relation with relation, seems to be the whole of Reason.

8. Seeing then that Comprehension is essential to every act of Reason, and that it may even exist without Intuition as to truth or falsehood, it may be called *Reason in embryo*, leading on to the perfect plant, which combines Intuition with bare Comprehension. Reason, in its developed state, may be divided into simple and

¹ See more on this subject in the Author's "Principles of Psychology." Part III., chap. 7.

complex Intuition, (each of course embracing Comprehension) the former discerning relations between Notions and Notions, or Things and Things, the latter discerning the Relations of Relations, and consequently embracing the former and something more, and commonly called Reasoning. Milton talks of Reason as either *Intuitive* or *Discursive*, meaning by the latter Reasoning, and this distinction agrees with the above ; yet the words fail to note that a mental condition, properly called *Intuition*, is common to both ; that a discerning of the connection between one Proposition and another is akin to the discerning of the connection of one Notion or of one Thing with another ; and that in both cases the proper name for this native mental clear-sightedness is *Intuition*.¹ But these two phases of Reason must be treated separately. Though the full moon embraces the half-moon, yet the half-moon differs from the full.

¹ The passage in Milton is as follows, being part of the speech of the angel to Adam :—

“ Whence the soul
Reason receives, and Reason is her being,
Discursive or intuitive ; discourse
Is ofttest yours, the latter most is ours,
Differing but in degree, of kind the same.”

PARADISE LOST, Book V., line 487

CHAPTER II.

OF SIMPLE INTUITIVE KNOWLEDGE.

1. The knowledge which we obtain by simple Intuition is, like knowledge in general, either Certain or Probable, but in all cases it is original, not derived from any previous knowledge. Simple Intuition is therefore strictly a *source* of knowledge, as Instinct is another, and the two are quite different. By instinct we believe, and firmly believe many things, so firmly that we can say and do say that we not merely *believe* but *know* them ; but we cannot tell why we believe ; we can see no connection between the notions or the things which we unite, though from long custom we think them inseparable, and can with difficulty be brought to allow that there is no necessary connection between them : but by Intuition we mentally discern that two notions, or two things, are related, in other words, our Reason is satisfied. It is evident that Reason, like Instinct, must begin with truths which support themselves, as a building must rest on self-sustaining ground ; that there cannot be a perpetual suc-

cession of proofs any more than of bases, and therefore that there are first truths which we either blindly believe or rationally discern. The former admit of no proof, and the latter require none. The first we have already considered, the last we shall now investigate.

2. Simple Intuitive knowledge, as we have said, is either Certain or Probable. To the former category belong, in the first place, what are called the Axioms of Mathematics or the Science of Quantity, such as "Things which are equal to the same, are equal to one another." "If equals be added to equals, or subtracted from equals, the wholes, or the remainders, will be equal." "If unequals be added to equals the whole will be unequal," and many more such, as well as that axiom proper to geometry "two straight lines cannot enclose a space." These and other similar axioms we discern *at once* to be true, as soon as the terms are understood; we discern them to be true *certainly*, to be true *absolutely*, independently of time and circumstance, to be true *for ever*; and all this without any teaching except the meaning of the words, by the native power of the mind, in a word by Reason. All the arguments in the world could neither shake nor increase our conviction of these truths, which are not only self-evident, but necessary, that is independent of time or change of circumstances. Without such a conviction mathematical science could not advance one step, it must remain for ever an ingenious supposition, like the machines of Archimedes without a fulcrum; but given the conviction of those simple truths, the system of the world may be discovered, though it cannot be moved from its course.

3. The self-evident and necessary nature of the propositions above-mentioned and of others similar, depends upon this, that they express the relations of abstract notions, and are independent of actual matter of fact. All that is required is to have clear and complete notions of the Universals which these notions represent, and as in matter of Quantity such clear and complete notions are attainable, the agreement or disagreement of any two such notions is at once apparent. Here, Simple Intuitive knowledge, as far as it goes, is perfect.¹

4. But there other primary propositions, where matter of fact is introduced, and where, accordingly, on the ground of our ignorance, there may be some room for doubt. So long as our attention is confined to those abstract notions which the mind makes for itself, and which it can perfectly conceive, so long our intuitions concerning them are free from all source of error; but when we look beyond the mind itself to the world without, we embark at once upon a sea where we may readily lose our way. What is purely mental the mind can thoroughly know; but what is without, it can never know but imperfectly. Therefore Mathematics, or the Science of Quantity, which treats of the modes or modifications of time and space, and their relations, without any reference to the material world, and Psychology, or the science of mind and its phenomena, are susceptible of the nearest

¹ It may create surprise that a vast system of Natural Philosophy and Astronomy should be raised on abstractions; but Natural Philosophy, as well as Mental, is based upon facts, observed and generalised, and Mathematics come in merely as a handmaid or assistant, as a machine for calculating Quantity; without which, however, no progress in Natural Philosophy could have been made.

approach to perfection, how far soever the latter may at present fall short of that high position. Difficulties arising from the fleeting nature of mental phenomena, their indistinctness, their endless variety, their multifarious combinations, and the ambiguity of terms, may long retard the advance of psychology, but the subject of the science is clearly within our ken.

5. But when we turn to the world without, to the material universe, we soon see that our knowledge is imperfect, and must always remain so. What Matter is we can know only as it affects us, or through mental phenomena, that is *mediately*, not *immediately* as we know those phenomena themselves; and what is known but mediately can be known but imperfectly. What changes the object may undergo in passing through the medium, and what never transpires through that medium, we cannot tell. Therefore, from the very nature of the subject, not from the difficulties attending the study, Physical Science, in spite of its tangible results, in spite of its *positive* pretensions, is, and always must be, imperfect. We may know a great deal more, and more accurately; but we never can raise the veil which separates Matter from Mind.

6. Besides, when we look beyond ourselves, abroad and around, if we think at all, we must be struck with the depth of our ignorance. Nothing but what is out of the common course of things strikes the unthinking mind, and rouses wonder; but that common course itself stupifies the man of reflection. The thought of the world we inhabit revolving in space with perfect regularity, and maintaining an uninterrupted succession of seasons, essential to every thing that has life, while but a slight ir-

regularity would be total ruin; the consideration of vegetable and animal life, in all its forms and varieties, past and present, historical and actual, fossil and existing; the reflection that of all the multitudes of men and of other animals born upon the face of the earth, few, very few, comparatively, are maimed or imperfect, each bearing a near resemblance, in all important particulars, to others of the same kind; the fact that there are kinds or species, always alike, always different from other kinds or species; these and innumerable other facts are enough to overwhelm the Intellect, to confound the Reason. To the questions, how did these things begin? how are they maintained? what answer can we give. We must confess that all nature, every thing around, is an inscrutable mystery.

7. Such being our general Ignorance, and our ignorance of Matter in particular, how can we venture to say what is, and what is not impossible?

8. But, besides our ignorance, which incapacitates us from judging at all with respect to possibility or impossibility, there is a principle in the mind which tends to mislead us in regard to what is, and what is not, possible. This is the tendency to suppose that the world without is an exact counterpart of the world within us; that things constantly associated in our minds are necessarily joined in reality; that what we can conceive is possible, what we cannot, impossible. This has even been carried so far as to raise up as the Criterion of possibility the power of representing things in the mind as visible objects. On this ground, even a great class of mental phenomena has been called in question, and because we

cannot form a mental picture of General Notions, they have been declared impossible.

9. It is remarkable that even Hume, with all his acuteness, should have fallen into this trap. The sceptical philosophy of his *Treatise of Human Nature* is entirely grounded on two assumptions. 1. That every *Idea*, at least every simple idea, is the copy of an *Impression*. 2. That our Ideas or Conceptions are a sure criterion of the reality of things, that what we cannot conceive cannot exist. Starting from these premises, Hume infers that we have no separate independent Ideas of Substance, Time, and Space, because we have no Impressions thereof; and if we have no Ideas of these, they do not exist. Thus Substance, including Mind and Matter, Soul and Body, is got rid of. — On the same grounds he denies the infinite divisibility of matter supposing it to exist. “It is evident,” says he, “that as no Idea of Quantity is infinitely divisible, there cannot be imagined a more glaring absurdity than to endeavour to prove that Quantity itself admits of such division.”¹ Here the fallacy comes out to the light of day.

10. It is not a little curious that the two fundamental assumptions of Hume above mentioned embrace two fallacies of a nature diametrically opposed. By the one which we have already considered, the world within is made the criterion of the world without, the standard of what is possible, and this may be called an Immaterial or Spiritual system; by the other, according to which

¹ *Treatise of Human Nature*. Book I., Part II., Sect. 2, 3, 4. Hume may have modified his opinions afterwards, but these were his first views.

every Idea is the copy of an Impression, that is of a Sensation, the mind is subjected to matter to such a degree as to destroy all independent action, all formation of general notions or of relations, all conception of Matter, of Mind, of Deity. This, then, is a system of Materialism. The system is somewhat improved, if Impression be taken to mean not simply *Sensation* but *Perception*; yet, even then, it is a miserably narrow one, and binds the mind too much to outward things. If Impression embrace not only Sensation and Perception, but also Emotion, the improvement is greater, for Emotion has no necessary connection with things outward, and therefore the system departs farther from materialism. And, in justice to Hume, it must be admitted that he took Impressions in this wider sense, for he divides them into those of *Sensation* and those of *Reflection*, meaning by the latter, as he tells us, "desire and aversion, hope and fear," "passions, desires, and emotions," derived, as he states, not directly from the impressions of Sense, but from the ideas of those impressions by Reflection, and so removed from matter.¹ Thus Hume does allow to the mind a native power, which he calls Reflection, whereby Emotions arise; though he denies that it can form any notion of things about which we are constantly thinking and talking, Matter, Mind, Body, Soul, Spirit, and Deity.

11. Though it is well to be convinced of the depth of our ignorance, and to be on our guard against the fallacy of assimilating the world without to the world within, or of taking the one as the counterpart of the other; yet,

¹ *Treatise of Human Nature*. Book I., Part I., Sect. 2.

we must not so abuse the doctrine of ignorance as to infer that nothing can be known, or, at most, nothing beyond what we *feel* and *perceive* through the Senses, and generalizations from them; falling thus into universal, or, at least, a modified Scepticism, which degrades human nature by lowering Reason, and denying its heavenly birth. Thus is man brought down to grovel in the dust, to limit his view to the present scene, and content himself, like the brutes, with sensual delights.

12. Are there then no simple intuitive truths cognizable by Reason, except those which relate to the phenomena of our own minds in general, or to abstract notions of quantity in particular? Can we determine nothing as to the origin of ourselves and all around us? whence we come, whither we are going, wherefore we are here? These are the three momentous questions which embrace all that most concerns us. It is clear that unless we have some simple intuitions with respect to these questions, we can learn nothing about them by reasoning; for reasoning must have premises, must have a starting point whence it may press on to the goal. Still less, if possible, can we know about them by experience; for they are clearly beyond its reach; and besides, experience without a mind prepared to draw inferences from it is of no avail. Now, inferences from experience must be drawn either instinctively or rationally, and as the above questions evidently cannot be solved by Instinct, they must be solved, if at all, by Reason, and if by Reason, then there must be simple Intuitions from which Reason may start.

13. The first question relates to the origin of ourselves

and others, and of all around us, animate and inanimate. Can we give any answer to this question ; can we determine any thing concerning it, with probability at least, if not with certainty ? Or, must we give it up as insoluble, and limit our view to the present scene ? That man will never acquiesce in this utter ignorance of the past and the future is almost certain, for he never has so acquiesced hitherto, in any state of society with which we have become acquainted ; but whether savage or civilized, learned or unlearned, he has never entirely separated his present from his past and his future. To sceptical philosophers alone has been reserved the attempt to induce him to limit his view to what he sees ; but an attempt so opposed to human nature is not likely ever to be very successful.

14. What view then, if any, does Intuitive Reason open up to us with respect to the origin of ourselves and all things around us ?

Here we see at once that there are but two alternatives ; either the course of nature, such as we observe it, has gone on from eternity, or it has not ; either it had not, or it had a beginning. Now, to affirm that the course of nature has gone on much as at present from all eternity, is at once to confess that we can assert or even conjecture nothing about its origin, that as far as we can see, it had none. We proclaim our ignorance, and pronounce it incurable. But the mind will not rest in this ignorance ; it will entertain suggestions and form theories as to the origin of things, and thereby it everlastingly confesses that they had an origin. This, then,

is the first truth of Intuitive Reason, that ourselves and all without and around us arose from something.

15. But what is that something? It must either have existed from all eternity, or have arisen from something else, and so on for ever without any beginning. But the supposition of an endless chain, of a perpetual cycle, is one, as we have already seen, in which the mind cannot rest, which it never seriously entertains, which it can barely comprehend, and never can believe. Therefore it must believe that something has existed from all eternity. Observe we do not say that it is absolutely certain, like a proposition in geometry, that something has existed from all eternity, but only that we cannot help believing it. The truth is intuitive; but not strictly self-evident. The contrary involves no manifest contradiction.

16. Something, then, exists from all eternity. But here an objection presents itself. If, after all, we are obliged to allow that something has existed from all eternity, why may not that something be the world as it now is? What do we gain by maintaining that something different from the world has so existed? Do we not then merely remove the difficulty one step? And what can our limited Reason do but remove difficulties one step? Gravitation, or the tendency of matter to matter, may be the cause which keeps the earth together, and maintains the planets in their orbits, but what is the cause of gravitation? Here we are stopped short. So it is in all our speculations about things existing; we never can go far. But what then? Are we to do nothing because we cannot do all? Are we to be content

with our ignorance because we never can be all-knowing? Are we never to advance because there will always be something beyond which we may not reach? Do what we will, ultimate causes will be involved in mystery; but proximate causes are within our ken. That our present difficulty is removed but one step by the belief in the eternal existence of something distinct from the world around, is then no valid objection, but an imperfection common to all our researches. Simple Intuition requires no reasoning to arrive at this result; but reasoning may be afterwards employed, as here, to remove objections. In addition to the above, we may remark that the researches of modern geology have proved that the course of nature *as it now is*, has *not* gone on from all eternity, that very great changes, changes which we now would consider miraculous, have taken place; that there was a time when man did not exist upon the earth, when quadrupeds did not exist, when birds did not exist, when there was nothing but reptiles or amphibious animals, or mollusca, and even no animal life; and consequently there seem to have been successive acts of creative power, proving a Creator distinct from the creation.

17. Finally, then, something exists from all eternity. But of what nature is that something? To answer this we have only to consider what we are ourselves. We are not mere creatures extended, and solid or impenetrable, but we are feeling and thinking beings, endowed with sensation, emotion, and thought; things totally different from what we call matter, nay, directly opposed to whatsoever bears that name, inasmuch as they are

neither extended, solid, moveable, divisible, nor limited to space. They exist not in space, but in time; whereas all material objects exist both in space and in time. Now can we believe, can we even for a moment seriously entertain the supposition, that what feels not, thinks not, foresees not, contrives not, may have formed a man? Is not this in reality to suppose that what thinks not may think, what foresees not may foresee, what contrives not may contrive? and if this be not a contradiction, what is? ¹

18. To maintain, as has been maintained, that a man may have been formed by a fortuitous concourse of atoms moving from all eternity, is almost too absurd to deserve notice; but let us entertain the supposition for a moment in order to see to what it amounts. In the *first* place it sets up a mere possibility, allowing it to be a possibility, against the very strong probability, to say the least, that a thinking intelligent being can have proceeded from one of like nature only. *Secondly*, even allowing the possibility that, in countless ages of time, *one* man may have been so created, in spite of hundreds of millions of chances to the contrary, yet how do you account for the existence of the *race* of mankind, of millions of human beings, past and present, and probably to come, and of the races of animals of all kinds now upon the face of the earth, or buried beneath its surface? Is each individual of those races supposed to have sprung from a fortuitous concourse of atoms? Thus the hundreds

¹ "He that planted the ear shall he not hear? he that formed the eye shall he not see?" he that made the thoughtful mind, shall he not think.—PSALM xciv. 9.

of millions of chances are encreased to hundreds of millions of quintillions to the contrary.

19. We see then, intuitively, and all reasoning confirms the simple intuition, not only that something has existed from all eternity, but something that thinks, foresees, contrives, an intelligent Being, in short, similar to ourselves as possessing intellect, how superior soever in degree, in a word, that there is a God.

20. Let us rest for a moment on this sublime truth. Though it requires a cultivated mind to rise to the conception of One Almighty Being, Maker of the Earth, the Heavens, and all that therein is, yet the notion of some Being or Beings similar though superior to man in intelligence and power, has existed among all men in all stages of civilization. And how ennobling is such a thought! ennobling, as proving the power of the human mind which can soar beyond this present scene, and as showing that man is made in the image of God, "a little lower than the angels, and crowned with glory and honour:" and how consoling! if our Maker be also our governor and protector. Could any thing that this world might bestow make amends for disbelief or scepticism on this fundamental point? Could riches, and power, and fame, and knowledge; could health of body and activity of mind, fill up the cheerless blank of Atheism! Those who deny that man can find out God, not only deprive him of a deep source of consolation, and so directly diminish his happiness, but they rob him of a magnificent conception, a sublime object of thought, and degrade his Reason by limiting it to the visible, the tangible, and the perishable. "I had rather," says

Bacon, "believe all the fables of the Legend, and the Talmud, and the Alcoran, than that this universal frame is without a Mind. And therefore God never wrought a miracle to convince atheism, because his ordinary works convince it."—"They that deny God destroy man's nobility; for certainly man is of kin to the beasts by his body; and if he be not of kin to God by his spirit, he is a base and ignoble creature: It destroys, likewise, magnanimity, and the raising human nature; for, take an example of a dog, and mark what a generosity and courage he will put on when he finds himself maintained by a man, who to him is instead of a God, or *melior natura*, which courage is manifestly such, as that creature without the confidence of a better nature than his own, could never attain to. Man when he resteth and assureth himself upon divine protection and favour, gathereth a force and faith which humane nature in itself could not attain.¹"

21. The first argument of the ancient atheists against the being of a God was, that we have no Idea of Him, and therefore can have no evidence of his existence; an argument similar to that whereby Hume exploded Space, Time, Substance, Mind, and Body. Now an argument which, pushed to its legitimate consequences, goes so far, has no peculiar force against Theism. If Atheism entail universal scepticism, it is already half refuted. But is it true that we have no idea, no conception of God, or of those things just mentioned? The reason why Hume denied that we have no *idea* of Time, Space, Mind, and Body, etc., was that we have no *impression* of them; but he ought rather to have concluded, as we

¹ Essays; *Of Atheism*.

have ideas of these, his theory, which requires an impression for every idea, was false. Can any one suppose that we can be continually thinking and talking of things, talking so as to be understood by every one, without having any conception of what we are saying? When the words, Body, Spirit, and God, occur in conversation or in writing, are we obliged to stop at every moment to ask what they mean, or can no one inform us? The supposition is a contradiction, it takes for granted that we can understand and not understand at the same time. We *have* then conceptions of those things, imperfect no doubt, but sufficient for reasonable discourse; and therefore this atheistical argument falls to the ground by our denial of the premises.

22. The other arguments of the atheists of old all depend upon the confounding of MIND with BODY, and upon the denial of the former, except as a modification of the latter. This is the perpetual assumption. But the system of Materialism had four varieties.

Thus there were:—

(1.) The *Atomic* or Democritical System of Materialism and Atheism.

(2.) The *Hylopathic*¹ or Anaximandrian.

(3.) The *Hylozoic*² proper, or Stratonical.

(4.) The *Cosmo-plastic*³ or Stoical.

Of these four, the first or Atomic System, called also Democritical from its founder, was purely material, it admitted of nothing but *Matter*, moved by blind chance, and supposed life and every thing beside ὕλη ἀποιος,

¹ From ὕλη, *matter*, and παθος, *affection*.

² From ὕλη, and ζων, *life*.

³ From κόσμος, *order*, and πλάσσω, *to form*.

bare matter or *resisting bulk*, to be merely accidental, perishable, and corruptible.

The second system, the Hylopathic or Anaximandrian, so far modified the above as to admit of the incorruptible existence of certain *affections* in matter, and thus departed a little from pure materialism.

The third system, the Hylozoic proper or Stratonical, and the fourth, the Cosmo-plastic or Stoical, agreed in introducing a principle of *Life* and *Order* into matter, and made that principle to be ingenerable and incorruptible, thus departing further from materialism pure; but the Stoics, in this respect, went beyond the followers of Strato. Thus, these four systems rise gradually from materialism pure to a doctrine approximating to immaterialism.¹

23. Since all we know of Matter as well as of Mind is their qualities, and as the qualities of Mind, Sensation, Emotion, and Thought, are totally different from those of Matter, Extension, Solidity, Mobility in Space, and

¹ Leucippus, Democritus, Protagoras, were the three most ancient atheists, of whom the first lived before the time of Plato, the two others about that time. Epicurus came long after. Democritus was a pupil of Leucippus, and Protagoras a pupil of Democritus, and all were of Abdera. On the ancient systems of Atheism, at large, see Cudworth's *Intellectual System*, Chap. III.

It is curious and instructive to see how often old and exploded errors are reproduced. Could it have been believed that the Hylozoic or the Cosmo-plastic system of Atheism, one or the other, should be promulgated anew in our day, under the significant phrase of the *self-evolving powers of nature*? Nay, that a clergyman of the Church of England should endorse the bill! See Oxford Essays and Reviews, 1860. Essay 3. In the same place, we are told that either development or spontaneous generation *must* be true. Would Democritus himself have spoken otherwise?

Divisibility, how absurd is it to give the same name to things having qualities not only dissimilar, but actually opposed ! But this absurdity belongs to all systems of Materialism, and hence to all systems of Atheism founded on Materialism. Those who, to avoid the introduction of Mind, gave Life and Order to Matter, and made it ingenerable and incorruptible, created something of their own, something widely different from the common conception of Matter, a heterogeneous compound of Mind and Matter, a union of contradictory elements.

24. There is probably no variety of modern Atheism which had not its prototype in antiquity. Thus the recent theory of *gradual development*, as it is called, whereby Matter is supposed *of itself* to have gradually assumed new forms, from the most simple state of animal being up to the most complicated, bears a strong resemblance to the Cosmoplastic or Stoical system of Life and Order inherent in Matter. But this theory is not only liable to the unanswerable objections common to all systems of Materialism, but it is opposed to all we know of animal life, actual and extinct. It is confidently affirmed by the greatest zoologist that ever lived, the indefatigable Cuvier, that there is not the slightest ground to believe that, since the beginning of authentic history, a single instance can be produced of the conversion of one species into another. The researches of geologists lead to the same conclusion. The species of fossil animals seem to have been as distinct as those that now exist ; and if the same species sometimes, though rarely, occur in different formations, new ones also appear, differing widely from those of more ancient date. Thus

the theory of gradual development is refuted by facts ; and we are irresistibly led to believe in successive creations of animals, and hence in successive exertions of Creative Power. Geology has amazingly increased the field of our knowledge ; it lifts us out of the present scene, and places us beside the wonders of an infinite past ; it shows us that before the earth and its inhabitants existed, as they exist now, many changes occurred which we would term miraculous ; and thus it forces upon us a Creative Mind, and refutes the argument against miracles drawn from the invariable course of nature.

25. When a system has become thoroughly discredited, antiquated, and obsolete, it may sometimes be revived with advantage by giving it a new name. Thus the doctrine of Materialism, as old as Democritus, reappears in our days under the title of *Positive* Philosophy. The name is well-chosen in this respect that it tells nothing, and so rouses curiosity, and leads us to expect novelty. But what is *positive* philosophy ? The positive philosopher professes to cling to the visible and the tangible and the material, and to reject all besides. He allows the uniform course of Nature, and says that we can trace the invariable sequences of phenomena ; but he denies Causation ; for Causation is a relation, and a relation is not material. And if he admit not Causation in things finite, of course he rejects a Cause infinite. Yet he does not boldly assert with Democritus that the world and all that therein is, animate and inanimate, arose from a fortuitous concourse of atoms ; for that would be too dogmatic ; but he maintains that the subject is quite beyond our ken, that we never can know

anything about our origin, and therefore we ought not to waste one thought thereon. Psychology, the Science of Mind, he treats with great contempt, except as a branch of Physiology; and Emotion and Thought are with him mere bodily phenomena. Still, he does not deny the existence of intelligent finite beings, other than himself, though in this he seems inconsistent, for how do these become known to him? Does he not see them? does he not feel them? it will be answered. He certainly may see and feel their bodies; but can he see or feel their intelligence? Assuredly not. Therefore, in reality, he has, according to his own system, no more proof of the existence of finite intellectual beings, than he has of an infinite spirit. From the phenomena of his own mind, and certain bodily appearances in those around him, he infers the existence of Intellect in other men, as from the phenomena of our own minds, and from the instances of design in the material world, we infer the existence of a Being of Intelligence supreme. The positive philosopher, to be consistent, ought to deny both God and Man; for our senses alone reveal to us neither. To this it may be replied, that it is not from bodily appearances only that we infer the existence of other intelligent beings, but from their speech, their rational discourse. True, from rational discourse we infer a rational being; but from written discourse, without the presence of a person in bodily shape, we should draw the same inference; and is not design, is not consistency, is not wisdom, as distinctly marked by the works of nature, as by the writings of men?

26. That God is not present to us in a bodily shape,

tells nothing. Were I to fall in with a complicated structure, such as I had never seen made, such as I had never beheld before, but in which I could detect a plan, and various contrivances all tending towards the carrying out of that plan, I should as certainly conclude that Man or some other intelligent being was its author, as if I had witnessed him at work. To this, perhaps, it may be objected, how can I tell what is plan or contrivance, if I have never been witness to the carrying it out? Must I not have had experience of some such work going on under my eyes before I can say that any purpose was really meant? To this I answer that the mere sight of a man at work does not prove design; he may be only amusing himself, and exercising his body without any definite end, like workmen in Ireland during the famine, who were employed to remove heaps of earth from one place to another, merely to keep them doing something. It is not then because I see a man at work that I detect design in what he is doing, but it is because I, with the eye of Reason, detect design in any thing, that I infer that Man, or some other intellectual Being, has been there. The discovery of design is thus, in the first instance, truly Intuitive, though, no doubt, early intuition may be cultivated and improved by a close attention to the structure of a machine, of a plant, of an animal; but, without a previous mental susceptibility, such study would be fruitless. We might have a thorough knowledge of all the parts of an animal, as mere anatomists we might be perfect; merely by the use of our senses, by our perceptions, and by manual dexterity; but by Reason alone can we determine Func-

tion ; and if there be no *intuitive* Reason, there can be none whatsoever.

27. Design necessarily supposes a designer. From this there is no escape ; for the one without the other is a contradiction. He then who allows design must, in logic, allow an intelligent author of that design, be he Man, Angel, or God. Therefore every physiologist who shows the uses of any part of the body, the purpose it serves, by the very employment of the word *purpose* implicitly confesses Deity.

28. Thus we arrive at the grand conclusion, that the Being of a God is one of the earliest truths of Intuitive Reason ; derived, *first*, from the thought that I exist, therefore something has existed from all eternity ; *secondly*, from the thought that I am an intelligent being, therefore something Intelligent has existed from all eternity ; *thirdly*, from the intuition of design in myself and in all nature, as necessarily implying a Designer. It is not pretended that all these propositions are in general clearly comprehended, much less that they are formally stated in words ; but that in some form or other they do unavoidably arise in the human mind, mixed up perhaps with many whimsies, but leading irresistibly, without conscious effort, to the one grand belief, belief in an Intelligent Being superior in wisdom and power to man. It is the business of the metaphysician to bring to light the latent processes of thought, and state them openly and clearly ; and if these be true to nature each mind will respond to their accuracy.

29. Let us rejoice then in the reflection that the being of a God rests on the first principles of human Reason ;

that so long as that Reason exists it *must* acknowledge a great Creator ; that all the ingenuity of atheists, all the sneers of scoffers, can never materially shake this deep conviction ; nay, that all the absurdities of Paganism, all the intolerance of Islamism, all the atrocities committed in the name of Religion, while they show the weakness of man, bear testimony to his belief in a God. It is this sublime belief, the glory and the consolation of man in all ages, the glory of his intellect, the consolation of his soul, which lifts our minds from earth and enables them to soar to heaven, fills the thoughts, warms the emotions, opens up a scene beyond this life, and gladdens and dignifies the present by hopes of the future.

30. In the beginning of the present century, there arose in England a sect, which, in the genius and self-confidence of its founder, in the talents and the almost fanatical zeal of his followers, in rigidity of system, consistency of views, and fearless adoption of logical consequences, resembles more one of the philosophical sects of antiquity than any that has sprung up in modern times. The first blast which called this sect into being sounded forth from Crichton in White Russia, whence, in the month of January 1787, Bentham uplifted his voice against the usury laws and law taxes. The French Revolution was then just beginning ; and no doubt the young English philosopher had drunk deeply of those intoxicating draughts which soon turned the heads of a whole nation. Indeed, the whole of his system is deeply impregnated with the then prevailing philosophy of France. This he transported to English ground, supported by all the powers of his acute mind,

and added enough of his own to make him the Idol of a large and highly-gifted circle. Like Socrates, he is better known through the writings of his followers than by his own ; for his early and best works were never finished by himself, and appeared only in a foreign dress, edited from rough materials, and translated into French, by Dumont, a citizen of Geneva. His own style, at first pure and simple, became afterwards almost unreadable, full of long parentheses, one within another, and stuffed with words of his own coining. Partly, then, from his own writings, but more from those of his followers, as well as from oral communication, we arrive at a knowledge of his system.

31. The avowed end and object of the whole was the greatest possible happiness of the greatest number, and the rule whereby to estimate any thing was UTILITY. The spring of all human actions was SELF-INTEREST, and consequently on the proper direction of this grand moving power, all good, all happiness, social and individual, must depend. Such was the end, such the rule, such the active principle of the system. It was a system of universal philanthropy, founded on a total disbelief in benevolence, or, at least, a total omission of that element in all calculations ; and it was a system of human enjoyment, based on a rejection of many things, in which men, blindly perhaps, but obstinately, persist in placing their happiness. Thus, to limit our thoughts to the scene before us was the only way to arrive at the perfection of human society on earth, and to deprive men of all hope in the future was the best expedient for delight in the present. The aphorism of a French philosopher was thus

adopted and inculcated: "les idées d'un autre monde font à celui-ci plus de tort qu'on ne pense."¹ Religion, accordingly, made no part of the system, neither natural nor revealed. I have by me at this time a publication by one of the sect showing the baneful influence of *natural* Religion on the temporal happiness of mankind; and by natural religion was meant *all* religion.

32. But God, religion, and all the hopes and consolations of religion, though the greatest, were not the only sacrifices which men were called upon to make to secure their temporal felicity. Art, elegant literature, especially poetry, were to be offered up on the altar of a merciless utility. According to Bentham, poetry was a noxious production, and the *Iliad* should have been thrown into the fire. In ethics, the sect were lenient towards sexual immoralities, partly because they were pleasureable, partly because they tended to discourage marriage, and so to check population. Outward actions, more than the disposition, were the proper object of the moralist; a principle diametrically opposed to that of the gospel. In politics, the opinions of the sect were democratical in the extreme, and rigidly systematic, resembling in this respect the principles of the French revolutionary legislators, despising all compromise, all attention to the particular circumstances of different countries. Thus the chief himself wrote a Project of a Constitutional Code for any country. His genius bore a strong likeness to that of the systematic Sièyes, the principal author of the uniform division of France into Departments, who thought to make Napoleon the well

¹ Say: *Petit volume.*

paid but powerless head of his grand Constitution.¹ In metaphysics, the sect were sensationalists, holding the material doctrines of Condillac in all their purity; that thought, intellect, reason, are only transformed sensations; that the Mind is a mere recipient of impressions, adding little or nothing to what comes from without; that it is nearly akin to matter, and perishes with the body. That many really benevolent, many superior men belonged to the sect, cannot be disputed; but a system must be judged by itself, not by the character of its supporters, much less of a few of them; and that system (as we have seen) was Epicurean, hostile to literature as opposed to science, materialist in the utmost degree, and irreligious. Such a system could scarcely have appeared but in a country like England, where the low doctrines of the French philosophers, combining with the matter of fact character of the people, produced a compound wherein real deformity and repulsiveness were concealed by no drapery, embellished by no graces, raised by no sentiment. Sentiment was laughed at, ornament abjured, grace unknown; but an iron, unbending, yet narrow utility, guided by a pitiless logic, was henceforth to mould the world.

33. Some of this sect were excellent logicians, and logic was to be followed at any price; but logic teaches consistency only, not truth, and if the premises be erroneous, or equivocal, or true only with limitations not stated and taken into account, the inferences may be all correct, the system harmonious and perfect in all its parts, and

¹ In Napoleon's own emphatic words, "un cochon à l'engrais de quelques millions."

yet the conclusions may diverge widely from the truth. One other characteristic of the Benthamic sect remains then to be stated, it was a sect of *Rationalists*, a name from its etymology too complimentary, but the import of which is thus given by Bacon: "Rationale enim genus philosophantium ex experientiâ arripiunt varia et vulgaria, eaque neque certo comperta, nec diligenter examinata et pensitata; reliqua in meditatione atque ingenii agitatione ponunt." This kind of false philosophy he also calls *Sophistica*.¹ Thus from the single principle of Self-interest, understood in the grossest sense, and in this sense not true to nature, the Benthamites deduced all their conclusions in Morals, Politics, and Legislation. The same species of false philosophy is again characterised in the *De Augmentis Scientiarum*:—"Alius error fluit ex nimiâ reverentiâ, et quasi adoratione, intellectus humani, unde homines abduxere se a contemplatione naturæ, atque ab experientiâ, in propriis meditationibus et ingenii commentis susque deque volutantes. Cœterum præclaros hos opinatores, et (si ita loqui licet) Intellectualistas, qui tamen pro maxime sublimibus et divinis philosophis haberi solent, recte Heraclitus perstrinxit. *Homines*, inquit, *quærun't veritatem in Microcosmis suis, non in mundo majori*."²

34. Among the *Idola Tribus*, or the source of errors common to the whole human race, we must include the tendency to be too much taken up with the material, the tangible, the visible, and too little with the immaterial, the intangible, the invisible. From this source springs Materialism and Atheism. That it is an *Idol* is clear,

¹ *Novum Organum*, Aph. LXII.

² Liber I.

for the spiritual world, as we have seen, is at least as certain as the material, nay more so, and without doubt the most important. In fact, the material world is to us of consequence only as it affects our spiritual being. There is something, unquestionably, in the permanence of the qualities of matter, as opposed to the fleeting phenomena of mind, which suggests the idea of the reality of the former, the absence thereof in the latter; but this is a mere delusion, for the Mind remains, though the phenomena change; and while they last, these phenomena are as truly real, as *positive* if you will, as any thing can be. In strictness, the only thing of which we cannot doubt is the present phenomenon of our mind, whatever that may be; on every thing else we may be sceptical without contradiction, but on this we cannot. Therefore the immaterial is beyond controversy, the material not; and consequently, it is unreasonable to believe in the latter more strongly than in the former, a mistake to be more occupied about it, an unpardonable blunder to confound the one with the other, and the climax of error to admit the material alone.

35. When the special occupation favours the general tendency, then the effect is seen in all its intensity. Such is the case with anatomists and medical men, who in the exercise of their calling are constantly employed in examining or in treating the body. That nothing more forcibly proves the existence of design and a Great Designer than the structure of the human body, is beyond doubt; yet so bad was the religious character of the medical profession, that it became an adage, *ubi tres medici ibi duo Athei*. Here we see the above tendency

in all its power. In spite of contrivances, so numerous, so complicated, so beneficial, so evident, that Reason must acknowledge them, and their bounteous Author, the universal tendency to be too much taken up with matter, added to the custom, peculiar to anatomists and physicians, of attending specially to the body, are more powerful than Reason. Thus materialism and irreligion are engendered, the strongest evidence to the contrary notwithstanding. For what evidence could we imagine stronger than the evidence of design, and hence of a designing mind, afforded by the human body? Were God to appear in a personal shape, the proof of his existence would be no greater. What work could we suppose Him to perform that would more plainly indicate his Intelligence and Power? Unless he were always present to our senses, Sceptics might doubt, and *positive* philosophers would deny, that he ever had really appeared, as they now doubt and deny the Resurrection of Jesus Christ. Some would say that it was a phantom, like the Docetes of old, a delusion, or a fraud, or might turn a deaf ear to the proper evidence, maintaining that all miracles were incredible. Nothing of this sort can be said against the evidence of a designing mind in the human body, and in the innumerable other beings around us, and truly may it be affirmed that he who is not convinced by these would not be persuaded though one rose from the dead.

36. Thus it appears that Materialism, or under its new name, *positive* Philosophy, is nothing more than a notable exhibition of an Idol common to the whole human race, propped up, in certain occupations especially, by the

power of constant Custom. These lower principles of our nature are continually at war with Reason, and sometimes quite overcome it. They impair the faith of all, or almost all, in the invisible world, whatever Reason and Revelation may suggest to the contrary; but in the Materialist and Atheist they obtain a complete victory.

37. It is a maxim of Bacon that Nature is best seen in extremes. Thus the extreme case of anatomists and medical men shows what a tendency to materialism there is in human nature, and how readily it can be increased even in the face of the strongest possible evidence to the contrary. We may be sure then that the same tendency exists, though in a less degree, in other and ordinary cases. The influence of anatomy on the mind was well understood by the late Dr Arnold, who therefore considered it a very dangerous study. Anatomy a dangerous study! which, to use an anatomical phrase, *demonstrates* the being of a God. Yet he was right, for Custom soon deadens our sensibility to the wonders of design before us, which at first exercise Reason and rouse Emotion; while the same custom more and more impresses matter on our senses. It is a combat between the higher and the lower principles of our nature, wherein, so long as novelty exists, the advantage is in favour of the former, but as that wears off, the latter obtain the ascendancy. And this result is facilitated by the natural tendency of all men towards materialism. We deem it extremely important to keep this tendency in view, for it shows us the origin of many false systems, and warns us against what we ought to struggle. To dethrone this Idol, is the

grand object of a pure and spiritual religion, the religion of the Gospel, which contains the noblest philosophy, the philosophy of Mind as opposed to the philosophy of Matter.

38. While the Belief, and hence the Philosophy of man tends so readily to materialism, his feelings and his sentiments often show his better nature. Thus the more man advances in civilization, the more is the material kept out of sight, covered with a veil, and surrounded with a multitude of adventitious circumstances to mask the gross reality. All the pomp of the world is paraded before our eyes to blind them to what lies behind the scenes ; and nobody must even hint at what every body knows. The pleasures of sense may be mentioned, only if moderate, and in any case they must be briefly dismissed. To talk much even of eating and drinking is thought bad manners, and to eat voraciously is disgusting. Drinking is more tolerated because it is not a mere pleasure of sense. There are I believe a few philosophers, and I hope but a few, who consider this natural modesty as a prejudice, for, according to them, one kind of pleasure is as good as another ; but the feeling is deeply seated in human nature ; it exists even in savages, but much more in civilized life ; and it proves that man, though he cannot forget his body, is ashamed of its wants and its enjoyments, for he knows of something higher. Why this shame, if the body be not felt to degrade the mind ?

39. We have said that the more a people advances in civilization, the more the wants of the body are concealed. It is this which constitutes *refinement*, and refine-

ment is the very soul of civilization. Many, very many elements, no doubt, enter into the complex idea of civilization; but the principal element is a modesty and delicacy about the body and its wants, in a word, refinement. One people may be inferior to another in wealth and political importance, even in science, literature, and general acuteness, but if they be more refined, they will still be at the head of civilization. Such is the case with Great Britain. Though in many respects France and other continental nations may equal or surpass us, yet in refinement we are before them all, and on this account we stand the first of the civilized world. We cannot walk through Paris or any other large continental city, we cannot travel along a foreign railway, without being struck with the want of refinement to which we are accustomed at home. It may seem to some that in England this is carried to an excess, but fastidiousness is better than grossness. You are invited to a dinner where every luxury is placed before you, but you must seem to care for nothing. You may eat what is offered you, but sparingly, and slowly, without avidity; you must by no means praise any thing and say how good, and you must not even ask to be helped twice to the same dish, for you would seem to like it too well. In short, whatever your appetite, whatever you relish, you must show the utmost indifference to every delicacy, if you would not transgress the laws of refined society. There may be some excess in all this, and foreigners feel it irksome, but it is a good excess, it is a triumph of mind over matter.

40. Nothing shows more clearly the progress of refinement in England, and our superiority over the nations of

the continent, than our literature. The drama of the present day is certainly very inferior in general talent, especially in wit, to the plays of Congreve, Farquhar, Vanbrugh, Wycherly, and Cibber ; but these, in spite of their brilliancy, are now unreadable in company, and cannot be acted. The same may be said of not a little of Shakspeare, and all the dramatists of his time. Modern English novels may be read even by young ladies without a blush, but would you put Tom Jones, or Joseph Andrews, or Amelia into their hands ? Yet these were, and in talent still are, the first of English novels. And compare our present novels with those of France, the writings of Bulwer with those of Eugène Sue, Pelham with the *Mystères de Paris*. In talent, in brilliancy, we must yield to the novelists of France ; but in morality, in refinement, we surely may bear the palm. Refinement itself is highly moral ; it is an homage paid to mind by mind.

41. Religion, which raises our minds above the fogs of sense, and fixes them on the brightness of the invisible world, is, and must be, the greatest source of refinement. Those who have mixed with the lower ranks of life are aware that persons of the most humble station, deeply imbued with religious belief, are refined to a degree far above the ordinary standard to which they belong. What a triumph of Religion is here, which, amidst pressing bodily wants and privations, can purify and refine the mind and raise it above matter !

42. The principal active powers of nature are hidden from our view ; so that if we disbelieve in the invisible, the intangible, and the inaudible, we must disbelieve

those powers also. The needle turns to the pole, but who can see, touch, or hear the magnetic fluid? The telegraphic wire carries our messages with the rapidity of lightning, but who can perceive the galvanic current? Heat the effect is sensible, but the cause Caloric is concealed. These agents cannot be detected even by the most delicate balance, and hence they have been called imponderable; and we are called upon to believe in matter without weight, at least without sensible weight. And every philosopher does believe in them, though he knows not what they are in themselves, whether a peculiar sort of matter, or a modification of ordinary matter. But, if we are to disbelieve in God because we cannot see, touch, or hear him, then ought we to disbelieve also in those imponderable agents, and Religion and Philosophy must fall together.

43. We have shown that Materialism in all its varieties is nothing more than an exhibition of a grand idol of the human mind, the tendency to be too much struck with objects of sense, and too little with those of reason. This tendency is shown in every thing. Hence, for instance, the belief, almost universal, that changes of weather depend upon certain changes of the moon, upon the new, the full, the quarter-moon, though there is no more *reason* for the belief than for the superstition once attached to eclipses, a superstition which cost the Athenians their whole force in Sicily. A rather remarkable change of weather having occurred about the time of the last great eclipse of the sun, (March 15, 1858), the eclipse became the ready cause, though it scarcely

“Disastrous twilight shed
On half the nations.”

The same tendency was grossly shown in the philosophy of the Kentish clown, who maintained that Tenterden Church steeple, then newly built, was the cause of the Goodwin sands. In fact, the tendency is universal, the instances thereof are innumerable. Any thing that strikes the senses will do for a cause.

44. This power of the material and the palpable over our mind is greatly assisted by another, the force of CUSTOM. We have shown elsewhere¹ that some of the most important opinions of the mass of mankind are mainly owing not to reason but to custom; and if such be the power of custom over important opinions, its influence on minor matters will scarcely be disputed. We believe, in short, that a great deal commonly attributed to reason is owing only to custom; and that many actions, of the lower animals especially, which look rational, are, in truth, only customary. When two things, and two phenomena have frequently been observed conjoined in time or in space, whenever we remark the one we are sure to expect the other. There is a tendency to this expectation even after one conjunction, as we have already seen; but this tendency is much strengthened by repetition. Such is the power of custom, and by it we may explain a multitude of facts without having recourse to reason. It is thus that we expect that the sun will rise and set in future as in times past, that the seasons will succeed each other in their customary order, that spring and summer,

¹ See the Author's "Principles of Psychology." Part III., chap. VIII., sect. 19, 20, 21, 22.

autumn and winter, will never fail ; that no earthquakes, no volcanic eruptions, no deluge, no fire will destroy us ; and that everything will go on much as usual. So, the man of uninterrupted good health cannot believe that he shall ever be an invalid ; but when he falls ill he anticipates the worst ; while he who has long been an invalid can scarcely believe that he shall ever die. The same holds true, more or less, of every man, and is no doubt a great cause of courage, even in imminent danger. We are so accustomed to life that we cannot realize death ; but when death does strike beside us, much more when the body is consigned to the tomb, we are so impressed by the blank, by the disappearance of the bodily presence, that our faith in the invisible world is rudely shaken, and melancholy contends with grief. But this doubt, this despondency, is not rational ; it is not caused by any new fact, any new reasonable ground of disbelief, but simply by the violent interruption of Custom, which produces an effect quite independent of Reason. The body is gone, and with it all appearance of life, all outward signs of mental existence ; our senses are no longer impressed, our blind belief in continuity is dispelled ; but, in all this, there is no *reasonable* ground for despondency. That all men die we knew very well before, and if the fact did not prevent faith when the king of terrors was far off, neither should it drive us to despair when he is close at hand. But the further consideration of Custom must be reserved for the following chapter.

CHAPTER III.

OF COMPLEX INTUITIVE KNOWLEDGE.

SECTION FIRST.

OF *REASONING* IN GENERAL.

1. Since Simple Intuition can go but a little way, we are obliged to have recourse to a series of Intuitions, each depending upon that which went before, and thus all hanging together, and this is called *Reasoning*. There is thus nothing peculiarly mysterious in reasoning, nothing more mysterious than in the Simple Intuitions of which it is made up, and as simple intuition is either certain or probable, so is Reasoning demonstrative or otherwise. There are then two distinct *kinds* of reasoning, generically the same, specifically different; but how many *varieties* there may be of each, no one can say. This only we may affirm with tolerable confidence, that, although there must be something common to all Reasoning, or the same name would not have been given to the process in all cases, yet as there are two distinct kinds thereof, and as

simple intuitions are various, so must reasonings be various, and not reducible to one type by any legitimate exercise of ingenuity. To suppose for instance, as it has been supposed, and on high authority, that all reasoning can be reduced to the form of the Scholastic Syllogism, is contrary to what we should expect from the *nature of the case*, or *a priori*; as well as utterly at variance with facts, that is, with real instances of reasoning drawn from different sources.¹

2. Since the mind of man is exceedingly diversified, fertile and ingenious in finding out relations between things, we must suppose that reasoning which traces those relations is no less diversified, and that the attempt to reduce all reasoning to one type is as violent, as opposed to nature, as that whereby the bed of Procrustes was made to fit all guests. Nothing is gained by this excessive simplification but a specious uniformity concealing a real diversity, a starched and stiff appearance, like a man in a straight waistcoat. These unnatural generalizations are the bane of science, for they give it an air of perfection which it really has not, and so prevent further inquiry. The scholastic syllogism has acted like the swaddling clothes of children, within which they may exercise their puny limbs, but out of which they cannot escape.

3. We have seen that Reasoning is a substitute for Simple Intuition; and if our faculties were greatly enlarged we might see many things at once which now we can find out only by a process of reasoning. When we

¹ See on this subject the Author's "Principles of Psychology," Part III., chap. X., section 2., where the *nature* and *value* of the SCHOLASTIC SYLLOGISM are thoroughly discussed.

have thoroughly mastered a subject, the truths become so familiar and so evident, that we *seem* to know them instantly by simple Intuition, though at first we may have been long in acquiring them. One difficulty in distinguishing between Simple and Complex Intuition or Reasoning, is the excessive rapidity of the mental process in many cases, and the consequent oblivion of the intermediate steps. Many facts prove the wonderfully rapid flow of ideas in dreams; and the difficulty of remembering them may be owing chiefly to this cause. Whatever is very transient can leave but little impression. This difficulty of distinguishing between Simple Intuition and Reasoning is a strong proof of their similarity.

4. Where two things cannot be compared directly so as to determine the relation between them, we must have recourse to some *medium*, the relation of which to each of the things in question is either apparent or can easily be ascertained. Thus, if I wish to prove the respective heights of two trees far apart, the difference between them not being great, I cannot tell from sight merely which is the taller, but, on applying a measuring line to each, I learn what I want. So it is with Reasoning. The whole *art* or ingenuity of Reasoning consists in finding out *media* by which the unknown relations of things may be discovered; and the whole *science* of reasoning consists in knowing when reasoning is valid and when not. The former cannot be taught by any known rules, it depends upon a fertility of mind, natural or acquired by long practice; but the latter may be promoted by certain rules, especially relating to the fallacies and sophisms

into which men are apt to fall. These rules, then, teach us rather what to avoid than what to seek, how to shun sophistry rather than how to reason conclusively; and so it is with all the rules of LOGIC, which is a practical science, not one of pure speculation. The knowledge of the process of Reasoning belongs to pure Psychology, the rules to avoid sophistical reasoning appertain to Logic.

5. Since the object of Reasoning is to prove one proposition by means of another, it necessarily follows that Reasoning must start from something not proved but given, some *datum* to lead us on to something else; and, therefore, on the soundness of this *datum*, as well as on the accuracy of the reasoning, the truth of the conclusion will depend. Where the *data* are self-evident, the conceptions perfectly clear and distinct, as in pure geometry, the reasoning only can be in fault; but on most subjects, in all where pure quantity is not concerned, the *data* are not strictly self-evident, and the conceptions not defined with perfect accuracy. Therefore, in all these cases, the premises as well as the reasoning may be wrong, and though the latter be without a flaw, the conclusion may be unsound. Now Logic, properly so called, pure Logic, does not teach us how to arrive at the knowledge of premises; and therefore perfect dialectics may coincide with the grossest error.

6. Where pure *Quantity* is concerned, there is no difficulty in finding the premises, and when found, they are, beyond all question, universal, without exception or limitation; but where *Quality* is introduced, there at once enters restriction, reservation, a want of determina-

tion; and hence the necessity of looking on all sides to see where different qualities agree or clash. Without this comprehensive view we produce systems beautifully consistent, but deceitful; for professing to embrace all, they give only half the truth. Thus on the Self-interest of the Benthamic school was raised an edifice of perfect symmetry, though on a narrow basis, pleasing to behold, but unsafe to inhabit. It is on this account that Mental Philosophy, pure and mixed, affords so much better an exercise than Mathematics, which employ the reasoning faculty alone, and require no circumspection, no suggestion of the opposite sides of a question, no balancing of arguments for and against, no allowance for circumstances, no limitations in the conclusions.

7. These things being considered, we shall be disposed to believe that error arises more from a deficiency in *data* than from inaccuracy in reasoning. Inconclusive reasoning any one may detect, but to supply what has been omitted in the premises is a far more difficult task. For this purpose comprehensiveness of mind and impartiality are both required; a combination of intellectual and moral qualities which no rules of art can teach. It is this comprehensiveness of mind which peculiarly distinguishes Bacon, not the subtlety of his reasoning. In the latter he would have been no match for some of the school logicians. Now this comprehensiveness is not at all required in pure Mathematics, where the *data* are few and simple, and where none can be overlooked. The certainty of the conclusions depends, no doubt, upon this simplicity, but the same simplicity is unfavourable to any varied exercise of thought.

8. Something similar may be said of pure Logic. Pure Logic works in a nut-shell, but within those limits it works securely. It makes no account of the truth or falsehood of the premises; but it determines by unerring rules whether the conclusions be accurately drawn or not. Thus it favours acuteness but not comprehensiveness, a facility for detecting errors rather than for making discoveries, a love of disputation and victory more than a love of truth. Still this is a mental exercise of no mean value, which sharpens though it may narrow, producing a pleader rather than a philosopher. Dialectics is the proper education for a lawyer, especially an English lawyer, who, assuming for premises the most whimsical fictions, bends the whole force of his mind to reason consistently with these. The legislator, on the other hand, should establish sound general principles, which the lawyer must receive and adopt, be they bad or good. The frame of mind proper to the one is, therefore, but ill-suited to the other.¹

9. As the intellectual qualities of the lawyer and those of the legislator are very different, so are those of the critic and commentator on the one hand, and of the independent thinker on the other. The object of the philosophical critic is to detect errors,—that of the independent thinker to strike out something new; the former pores over the works of others, the latter consults more his own mind; the one delights in showing that the supposed discoveries of the other are as old as Aristotle

¹ “Unfit with great affairs to mix

His little *nisi prius* tricks.”

—See MOORE’S “Epitaph on a Lawyer.”

and Plato ; that is a scholar, a learned antiquarian, a practised logician, this cares little for authority, reads only to think, reasons only to discover, and propounds theories ingenious, original if not new, startling, perhaps even paradoxical. Each has his vocation, though of unequal dignity ; and each may degenerate, the one into a pedant, the other into a day-dreamer.

10. We must never forget that although reasoning be one grand engine for the discovery of truth, yet it is only a substitute for Simple Intuition ; that there is then a Reason which transcends all reasoning ; nay, that there is an Instinct which transcends a great part of reasoning, being before it in time, immoveable, the point on which the reasoning depends, without which the chain, however compact, must fall to the ground. Reasoning, then, in opposition to Simple Intuition, as well as to Instinct clearly ascertained, is utterly thrown away, is worthless, and worse than worthless, for it is unnatural, a war of the child against the parent. One of the most ingenious works of the present day, which professes to make Metaphysics a demonstrative science, errs in this very particular that it sets up reasoning in opposition to a higher Reason, to Simple Intuition.

11. All reasoning consists in drawing *intuitive* inferences ; but all inferences are not intuitive, and therefore all inferences are not cases of reasoning. Instances of the latter kind of inferences, which may be called *non-intuitive*, are innumerable, but in many cases they are so closely connected with the fact from which the inference is drawn, that the one is seldom distinguished from the other. When the heavens are covered with clouds,

and therefore the sun invisible, I readily infer from the light that it is above the horizon, and so with the moon. When I see the print of a horse's foot and of wheels, I infer that a horse and carriage have passed that way; and when I observe a horse saddled, I infer that some one has ridden, or is about to ride upon it. When I enter a room and feel it warm, I infer that there is a fire before I see it; and when I perceive a fire-screen in front of the chimney, I infer that it is placed to protect from heat. In short, most of those convictions as to the cause or the effect of every-day occurrences, convictions unattended with any effort, and supposed indisputable, are really inferences drawn without reasoning from facts observed. Nay, the very existence of outward objects is learnt only by inference from certain sensations which suggest those objects, and create a belief in their independent existence. On what principle these non-intuitive inferences are drawn, and how they may be distinguished from intuitive or rational inferences, we shall afterwards enquire; enough for the present to have pointed them out.

12. This much, however, we may at present remark, that these non-intuitive inferences are of two kinds, the one kind purely instinctive, the other depending partly on Instinct or original tendency, partly on Custom. Thus, our belief in the material world is an inference from certain sensations, and is purely instinctive, for it cannot be learnt or acquired from any previous knowledge; and so is the belief in memory, and in our own identity, from consciousness. Our belief in the ordinary succession of causes and effects depends, in the

first instance, no doubt, also upon an Instinct which prompts us to expect uniformity in nature; but this instinctive tendency is greatly modified afterwards by Custom. Besides, however great the tendency may be to expect uniformity in nature, this tendency is shown only *after* some one conjunction of events has been observed, not *before*; and therefore the belief is not purely instinctive as in the above cases. Certainly one instance of conjunction is not Custom, but it is experience, and one experience is necessary to develop the tendency to believe in future uniformity. Subsequently, frequent repetitions of the conjunction lead us to pass rapidly from the one event to the other, from the observed to the non-observed, and Instinct and Custom combine to fix our belief. Consequently, there are sufficient grounds for subdividing non-intuitive inferences into two kinds, of which the one may be called *purely Instinctive*, the other *Inferences from Experience*.

SECTION SECOND.

ON DIFFERENT KINDS OF REASONING.

1. Though there is a general resemblance in all Reasoning, yet there are differences sufficient to constitute different kinds or species. Thus we continually hear Reasoning designated as *Demonstrative*, *Probable*, *Inductive*, *Deductive*, and so forth, a specific epithet being

added to the general name, according to that natural mode of classification and nomenclature which Science has adopted and improved. Every kind of plant, every kind of animal, is designated by two words, one pointing out the Genus, the other the Species, as RHAMNUS *frangula*, FELIS *tigris*; and this is a natural system, borrowed from daily use, as when we talk of the moss rose, the dog rose, the Chinese rose, the brown, the black, and the white bear. In like manner, the common use of language supposes different kinds of Reasoning, or at least varieties, and these we must now endeavour to fix, and to ascertain whether they be real kinds, or only varieties.

2. We have seen that all Reasoning, properly so called, is based on simple Intuition. But a great deal of what commonly passes under the name of Reasoning is based, not on Intuition, but on Instinct. Thus, our belief in uniformity of nature is an Instinct, and from that Instinct we draw many inferences which are said to be the result of reasoning, or more properly, instances of reasoning. We must, therefore, either enlarge our definition of Reasoning, or deny that inferences from Instinct are entitled to that name. Allowing for the present that they are so entitled, then, at all events, there will be a clear distinction between Reasoning from Intuition, and Reasoning from Instinct. To the former of these we shall first turn our attention.

I. *Of Reasoning a priori.*

3. This distinction between Reasonings based on Simple Intuition, and those based on Instinct, seems to coincide with that between *a priori* and *a posteriori*

reasoning ; for, in the former, by the light of the mind, we discern a connection between the propositions ; while, in the latter, we only suppose instinctively that there is a connection because some similar conjunction has formerly been observed. The Instinctive belief that nature is uniform in her operations, in her constitution and course, lies at the bottom of all such inferences.

4. Beginning, then, with Reasoning properly so called, Complex Intuition, *a priori* reasoning, or Ratiocination, which all mean the same thing, we observe in the first place, that this also is of two kinds, according as it is founded on Intuitive truths, simple and certain, requiring no previous knowledge ; or otherwise, on *supposed* truths, the result of previous inquiry. These being granted, the connection between them and the conclusion drawn is no doubt intuitive, but the Premises are not so, and they may even be false. In this case, previous inquiry being supposed necessary, the whole proof leading to the conclusion is not *a priori*, though the ultimate reasoning be ; and therefore this may be called *a priori* mixed, in opposition to the former, which is *a priori* pure. Thus, all the propositions of Euclid are *a priori* reasoning pure, for they are founded on a few simple self-evident truths requiring no previous knowledge, and generalized thus, "Two straight lines cannot enclose a space," "If equals be added to equals the wholes are equal," &c. ; while all arguments about matters of fact contingent, such as trade ought to be free, therefore the corn trade ought to be free, are founded on propositions, the result of previous inquiry, not self-evident, and possibly not even true.

5. *A priori* reasoning pure is but of one sort. The

matter whereof it treats is all necessary, the reasoning demonstrative, and the conclusion therefore infallible. But *a priori* reasoning mixed is of two sorts, according as the reasoning is demonstrative or only probable; though in either case, the conclusion is not infallible, because the premises are only contingent. And this seems to exhaust the divisions of Reasoning properly so called, or Ratiocination.

6. Pure *a priori* reasoning is confined to the relations of Quantity; for in these alone the matter is necessary, the inferences demonstrative, and the conclusions infallible. This kind of reasoning, therefore, is limited to pure Mathematics, which is the science of abstract quantity, that is, of quantity separate from the material universe. Pure Geometry, Arithmetic, and Algebra, do not suppose the existence of the material world, and they would be true, though that world had no reality. This is the reason why the matter in pure Mathematics is necessary, for wherever the material world is introduced, there enters contingency. Thus all the truths of mixed Mathematics are contingent, for in them the material universe and the laws thereof form the subject of inquiry, the existence of that universe being taken for granted, and those laws supposed to be proved somehow, but not by pure *a priori* reasoning. Mechanics, including statics and dynamics, hydrostatics and hydraulics, pneumatics, and optics, all suppose the existence of the material world, either as a solid, a liquid, an air, or as light, and, in all these, the science of abstract quantity is applied to quantity concrete in these various modifications of the world without. Now, as the funda-

mental laws of the material world form in these sciences the basis of all the inferences, and as these are by no means intuitive and certain, but supposed truths, the result of previous inquiry, therefore all these sciences belong to the mixed *a priori* class.

7. Pure *a priori* reasoning, then, is confined to the relations of abstract quantity, called by Hume relations of ideas. Nothing can be more simple, more easily comprehended, than this kind of reasoning. It admits of no debate, no doubt, no hesitation; we either assent to it entirely or not at all; and we must master it ourselves, for no one else can make it plainer. This necessarily follows from its nature, based upon simple Intuition, and raised by other intuitions equally simple. The following is a type of all pure *a priori* reasoning.

A is equal to B, and B equal to C;
therefore A is equal to C.

This type will apply to geometry, arithmetic, and algebra alike, to all reasoning about pure quantity, whether continuous or discrete, whether of Space, Time, or Number. Take the following as a type of geometrical reasoning:—

A
B \triangle C

D
E \triangle F

G
H \triangle K

The triangle A B C is equal to the triangle D E F, and the triangle D E F to the triangle G H K, therefore the triangle A B C is equal to the triangle G H K. If a person do not at once assent to this conclusion, his case is hopeless.

8. If these be correct specimens of mathematical reasoning, then all such reasoning consists of three pro-
g

positions. And so it must from the nature of the case. If we could draw an infallible conclusion from one Proposition only, then the second or inferred proposition could be only a repetition of the first in another form ; it could not contain anything really new. Were there any thing new except the phraseology, then the conclusion could not be infallible, for it would not be comprehended in the premises. Consequently, three propositions, at least, are essential to every step of mathematical reasoning. Every such step must comprise premises and a conclusion, the former containing two propositions.

9. From the above it appears that there is no difference in any one respect between the two propositions of the mathematical premises, except in this, that the middle one may be compared directly with both the extremes. The first is not more important, not more general, than the second ; and if we chose to call it the *major* proposition because one of the terms is contained in the conclusion, where it may be made the Predicate, well and good ; but let us not suppose that the word *major*, in mathematical reasoning, means anything more than this.

10. We thus see that in mathematical reasoning there is no descent, no inference from the general to particulars. All the propositions which compose the reasoning are equally general, or equally particular. When we prove, for instance, that the angles at the base of an isosceles triangle are equal, we have no doubt a particular diagram, a particular triangle before us ; and so far all the propositions of the reasoning may be considered as particular ; but the mind instantly generalizes and ap-

plies them to all similar triangles, that is, to all triangles with two equal sides. And this it does with certainty, for nothing else than the equality of two sides is assumed in the course of the reasoning. Mathematical reasoning may therefore be called *reasoning on a plain*, in opposition to that whereby we descend from generals to particulars, or to the less general.

11. The only doubt that can now remain as to this reasoning is, on what it is founded. Books of Geometry usually set out with definitions, axioms, and postulates, and it is commonly supposed that from these the Reasoning proceeds. Now all discourse supposes that the terms made use of are understood, otherwise it would be mere gibberish. Therefore, in every discourse, definitions are either given or are considered unnecessary, and we have no reason to say that mathematical reasoning is based on definition, more than any other. Many of the definitions of geometry are in reality unnecessary, for every one knows what is a triangle, a circle, and a square; but they are given *pro formâ*, and to obviate the possibility of a mistake.

12. Is, then, mathematical reasoning based upon axioms and postulates? Now what is an axiom? It is the generalization of a simple, certain, and intuitive, or self-evident truth. Now, as particulars are known before generals, the truth must have been discerned in particular cases before it was generalized; just as the theorems of geometry are proved by means of particular diagrams before they are seen to be true universally. It is, then, on a self-evident truth exemplified in a particular case that mathematical reasoning is founded, not on an axiom

or generalization thereof which comes afterwards. Thus, in the reasoning, the triangle ABC is equal to the triangle DEF , and the triangle DEF to the triangle GHK , therefore the triangle ABC is equal to the triangle GHK , we have no occasion for an axiom to prove this, though reference to one may be made on the margin, but the mind, attentive only to the particular *data* before it, leaps at once to the conclusion. Axioms then are not necessary; they are only neat and comprehensive expressions to show what is taken for granted in many particular instances, and the reasoning would be perfectly conclusive without them.

13. The same may be said of postulates. It is surely unnecessary to tell us, generally, that a line may be drawn from one point to another, and a circle described about a given centre, for every one allows, and, by the laws of thought, cannot help allowing, that such a thing is conceivable, that is, involves no contradiction, and this is all that is required in a geometrical problem; for in pure geometry we deal not with material, but with ideal lines and circles. Postulates, then, are unnecessary; they tell us nothing; they merely state, generally, what by the fundamental laws of thought we cannot but acknowledge in every particular instance.

14. On what, then, is mathematical reasoning founded? It is founded on simple, certain, and intuitive, or self-evident truths, discerned at first in particular instances, and generalized afterwards. It is, then, on the truth as comprehended by the mind in a particular instance, not on the subsequent generalization, that the reasoning is based.

15. Pure *a priori* or mathematical reasoning is valuable as a type of perfect ratiocination, starting from certain and intuitive or self-evident truths, proceeding by unerring and intuitive inferences from these, and arriving at last at conclusions entirely new, which, without reasoning, could never have been known or hardly suspected. Who, prior to demonstration, could ever have supposed that, in a right angled triangle, the square of the side opposite the right angle should be equal to the squares of the two sides containing the right angle? Such conclusions as these are arrived at only after a very long chain of reasoning, and are real *discoveries*, not merely explicit statements of something implied in the premises and therefore really known beforehand, as in the syllogism of the schools.

16. Mixed *a priori* reasoning differs from pure in this, that the bases on which it rests are not self-evident nor even certain; so that were the reasoning unassailable, the conclusion might still be false. Thus all the reasonings of mechanical philosophy start from a few general laws of motion which are assuredly not self-evident, and are only arrived at by generalization *a posteriori*, that is by experience, which can never give infallible results. So all general reasonings about morals and politics rest on certain facts in human nature supposed to be known from experience, though they may not be universally true, and may have many limitations. At the best, they are neither self-evident nor certain. But this kind of enquiry admits of subdivision, according as the reasoning is demonstrative or only probable.

17. Demonstrative mixed *a priori* reasoning is again

of two sorts, as it is employed about quantity, or about other things. When employed about quantity it raises the whole structure of mechanical philosophy—that is the philosophy which treats of *sensible* rest and motion, whether in solids, liquids, or gaseous matter, comprehending statics, dynamics, hydrostatics, hydraulics, pneumatics, and optics. Celestial mechanics, or physical astronomy, is only an application of the general principles of mechanics to the motions of the heavenly bodies. In all these sciences the reasoning is strictly demonstrative, though the ground on which they rest may be shaken. Thus the law of gravitation has been and may still be assailed, and the Copernican system of the universe may still be called in question. We may even doubt about the laws of motion. Moreover, the conclusions of theory are not always found correct in practice; not because the reasoning has been incorrect from the *data*, but because the *data* have been insufficient.

18. This is the sort of reasoning which contributes most to the self-complacency of man, for it has raised the most secure, the most spacious, and the most lofty fabric, the glory and the crown of human efforts. By means of this reasoning we have not only directed all the powers of nature at our will, and turned them to our use by the aid of machinery; we have not only abridged Time and Space upon earth; but we have measured the distances of the heavenly bodies, weighed them in the balance, determined their movements, calculated their return to any spot in the sky, nay, announced the existence of planets before they were apparent to mortal sight.

Such achievements, not to be contested, may swell the pride of man and induce him to look down with pity and contempt upon sciences open to doubt, full of noise and controversy ; but these, if they teach us humility, may be more profitable, morally, than the others. If mechanical philosophy shows the strength, moral philosophy testifies to the imperfection of the human intellect ; and we ought to be aware of both. The worst tendency of Mathematics is to make us discard every thing which admits not of demonstration ; but this is mere narrowness of mind, which knows nothing beyond its own sphere. The most important quality of a truly philosophic mind is comprehensiveness.

19. But may not demonstrative mixed *a priori* reasoning be applied to other subjects than quantity ? That is a great question. Quality differs from Quantity in this, that the differences of the latter are fixed and determinate, even the smallest, while those of the former are indeterminate, one quality gradually, and often insensibly, passing into another. How can such differences be the subject of demonstration ?

20. This fundamental difference between Quantity and Quality seems to me decisive of the question. Now morals treat of Qualities, and therefore morals do not admit of demonstration. When then we do meet with reasonings about relations other than those of Quantity which bear a demonstrative air, we may fairly suspect that they are demonstrative only in appearance, in form, not in vitality ; that is, they contain in the conclusion nothing really different from the premises ; what is stated in general in the one, being stated in particular in the

other. Now this is the whole secret of that specious sort of demonstration, the Syllogism of the Schools; which never did, and never can lead to any discovery, to any thing not already known, because the universal proposition, which forms one of the premises of the Syllogism, must comprehend the conclusion, or there is no formal proof. This mock sort of demonstration, though laboured by the most subtle of men for many ages, has produced nothing, while real demonstrative reasoning has raised a mighty fabric reaching even to the stars.¹

21. But mixed *a priori* reasoning may be *probable* only, not *demonstrative*; and to this class by far the greater part of our ordinary ratiocination belongs. Most of our every day reasonings are not about Quantity, and therefore, in general, they are not demonstrative. They cannot then be subject to the strict rules of the Scholastic Syllogism, which is demonstrative in form at least, and consequently is certainly conclusive, or certainly inconclusive, according as these rules have or have not been observed. Probable reasoning, as the word enounces, has no such certainty, and therefore no certain rule whereby it may be tested. Still, that part of Logic which treats of fallacies tends to guard against error in probable reasoning, and to detect it, though not infallibly.

22. Probable mixed *a priori* reasoning agrees with that mock species of demonstration called the Syllogism in this, that both start from general propositions to arrive

¹ For a full inquiry into the nature and value of the Scholastic Syllogism, see the Author's "Principles of Psychology." Part III., chap. 10.

at conclusions less general; but the difference is that in the Syllogism the proposition is *universal*, in Probable reasoning, *general* only. When a proposition is true universally, or at least allowed to be so, of course every less general proposition comprehended under it must be true also; no reasoning is required to prove that; but when a proposition is true only in general, then reasoning *is* required to prove that any proposition is comprehended under it. Thus if we assert that all trade ought to be free, no doubt the trade in slave-grown sugar ought to be free; but if we merely assert that trade in general ought to be free, the question may still arise whether the trade in slave-grown sugar should or should not be an exception. And this may create a long discussion wherein all the arguments are not on one side, as they are in demonstration, but where one must be balanced against the other till we see which side shall on the whole preponderate. And though in this case the conclusion after all is only probable, yet the inquiry is a far more improving intellectual exercise than the uniform certainty of demonstrative reasoning.

23. When a proposition is universal, of course there is no room for limitation or exception; but when it is only general, other general principles may come into play, and conflict one with another. Thus, when we assert, in general, that trade ought to be free, this may be true as far as wealth is concerned; but it is also true that slavery ought by all means to be discouraged, and these two propositions are conflicting. Which do we think most important, a slight fall in the price of sugar, or a blow struck at slavery? This sort of suspense can

never occur in demonstrative reasoning, which prevents all distressing doubt, satisfies the intellect by its certainty, flatters us by its infallibility, and throws undue discredit on mere probability. No doubt it was this longing after certainty which led to the invention of the Scholastic Syllogism, and rendered it so popular, for it presents the phantom, at least, if not the reality of a demonstration, a phantom which has deluded many all their lives, a will o' the wisp which leads to nothing. To the School Logician, as well as to the Mathematician, probability is a poor thing, unworthy of the name of Philosophy, unworthy even of the name of Science, which should deal in strict demonstration. What can come of rigid demonstration in Metaphysical Science may be judged of by a modern publication professedly founded and raised thereupon, which, after a laboured inquiry and proposition on proposition, ends in nothing. Such must ever be the case where demonstration is introduced into subjects not its own; the demonstration is a sham, and the result disappointment. Probability and doubt, which go together, may be unsatisfactory, distressing, humiliating, but they are, for the most part, the condition of man on earth; and though infallible reasoning may be as comfortable as an infallible church, yet we seldom can have the one, and never the other.

24. We have shown that all real demonstrative reasoning must consist of three propositions at least; but probable reasoning may have only two. That mode of speech which possesses the form without the reality of reasoning, namely, the Scholastic Syllogism, is also always

stated in three propositions; though sometimes one of them is superfluous. Thus in the Syllogism,—

All trade ought to be free;

The trade in slave-grown sugar is a trade;

Therefore the trade in slave-grown sugar ought to be free.

The second proposition is manifestly a tautology, redundant and useless; and the inference, such as it is, may be drawn directly:

All trade ought to be free,

Therefore the trade in slave-grown sugar ought to be free.

If this be worthy of the name of reasoning, then demonstrative reasoning may consist of only two propositions; but here, it is evident, no new truth is elicited, nothing not evidently comprehended under the first proposition, and therefore the reasoning is purely formed, not real. This then is no exception to the rule, that all real demonstrative reasoning, all which teaches us something, must have three propositions. But in probable reasoning it is otherwise. There, an inference may be drawn directly from a *general* proposition, and as it is not evidently and necessarily comprehended under that proposition, the proof is entitled to the name of reasoning.

Thus, trade, in general, ought to be free;

Therefore, the trade in slave-grown sugar ought to be free,

may be allowed to be reasoning, not in form only, but in reality, for it teaches us something new, something not identical with the first proposition, and consequently it contains a real inference, though only a probable one,

and so liable to dispute. And the inference is only probable, because it is drawn only from a general proposition, which, as such, does not exclude other general propositions, which may modify or reverse the conclusion. In like manner, the long series of inferences drawn by Bentham and his followers from their favourite proposition that all men are governed by their interests admits of numerous exceptions, if the universality of the proposition be denied, or if it be so understood as to be true indeed, but a barren truism, such as, that all men are moved by some desire or other, desire of something which they like.

25. Though the connection between the general proposition and the conclusion, in probable mixed *a priori* reasoning, be not necessary, yet, such as it is, it is seen intuitively,¹ or not at all. A long series of propositions may be required to arrive at the final conclusion, but the connection between each premiss and each conclusion rests upon its own inward evidence, not upon anything without ; it must strike the mind by its own power, not by any borrowed force ; it may be discerned, but cannot be proved. Thus the connection between the general proposition, "Trade ought to be free," and the conclusion, "the trade in slave-grown sugar ought to be free," is seen at once, is seen to be a probable connection, but not a necessary one, unless we begin by assuming that

¹ The word *Intuition*, as understood throughout this work, does not necessarily imply self-evident certain knowledge, but any knowledge, certain or probable, which the mind *discerns* at once without the intervention of proof. And even where proof is necessary, each step in that proof, each separate inference, is discerned intuitively.

“all trade ought to be free,” a proposition which would justify even the slave trade.

26. Is there, then, no form of probable reasoning but that which proceeds from a general principle to infer one less general, comprehended under it? This we cannot maintain without contradicting the plain evidence of facts. Other relations than that of comprehension are traced by probable reasoning. Take the following instance:—

A is greater than B, and B is *probably* greater than C, therefore A is probably (only) greater than C.

Or A is probably greater than B,

And B is certainly greater than C,

Therefore A is probably greater than C.

Here we have the relation of Quantity; but the reasoning is probable only; and there is no descent from a general proposition to one less general.

In Blunt's “Undesigned Coincidences,” (Appendix, xv.), I find the following sentence: “From this passage it appears that a *pavement* was near the Castle of Antonia; but we have already seen that the Castle of Antonia was near the palace (or Pilate's hall); therefore this pavement was near Pilate's hall.” All will allow that this is legitimate reasoning, though there is here no descent from general to particular or to less general, all the propositions being alike in this respect, on a plain, as it were, as in pure Mathematics, all, in fact, being singular propositions; but the reasoning is not demonstrative, on account of the indeterminate word *near*, which may mean six yards or sixty.

Again, A is similar to B,

And B is similar to C;

Therefore A is probably (only) similar to C ; for though A and C be both similar to B, the points of similarity between each of them and B may be different, so that between A and C there may be little or no resemblance. The eyes of one man may be like to those of another, and the mouth of the second to that of a third ; but the eyes and mouth of the first and the third person may be unlike. Here there is the relation of Resemblance, and the reasoning is probable, yet we do not start from a general proposition to arrive at one less general comprehended under it. This may serve as an instance of the impossibility of reducing QUALITY to demonstration. Probable reasoning, then, no more than all reasoning, can be reduced to one common form or type ; it assumes a variety of shapes according to the multitude of subjects to which it is applied, and the diversity of relations which it traces ; it cannot be cramped within the limits of a narrow system, and rebels against our love of uniformity ; though in this all *a priori* reasoning agrees, that from one or more propositions known, or at least allowed, we infer some other proposition not previously known or allowed, infer intuitively, without foreign aid, by the native force of the mind, in a word, by pure Reason.

II. *Of Reasoning a posteriori.*

1. In the opening of this inquiry, while we divided all reasoning into two kinds, the *a priori* and the *a posteriori*, we at the same time remarked, that, so great was the difference between them, it might well be questioned whether the latter were entitled to the name of Reason-

ing or not, but, in compliance with established usage, we should, provisionally, at least, allow it that title. We have now to inquire into the nature of this sort of Reasoning, and to determine whether it can, with philosophical accuracy, be so called.

2. All reasoning of this kind proceeds upon the fundamental assumption that from a number, more or less, of well-chosen examples of certain facts of co-existence or of succession, known by experience, we may safely infer that a similar co-existence or a similar succession will hold good in all cases *apparently* alike, though in these cases the fact of co-existence or of succession has not been actually observed. Thus, having dissected one horse, and learnt his structure, we believe that all animals bearing the outward marks of a horse are similarly framed within; and having observed that fire will consume wood to-day, we doubt not that it will consume wood to-morrow. That we are constantly drawing such inferences, sometimes without hesitation, without effort, almost without consciousness of any inference; at other times, in more complicated and obstruse cases, after deliberation, and doubtingly, is certain; but the question still remains; are these inferences instances of Reasoning or not, are they rational or instinctive?

3. If these inferences are rational, than are they intuitive, that is, the mind by its own force, without any extraneous aid, discerns the connection and draws the inference. But can this be affirmed in the present case? Why must all horses be alike internally? Why must fire which consumed wood yesterday consume other wood to-day? for neither the fire nor the wood is the

same as that of yesterday ? Most persons probably will consider these questions too simple to require an answer. We do not easily allow a difficulty where none has ever been suspected ; we require no reason for that which has constantly been taken for granted. Common inferences from experience have been made so often, so long, so rapidly, and so surely, that to doubt them seems absurd, irrational ; but the doubt is not contrary to Reason, it is only contrary to Instinct. Turn the question over and over, probe it to the bottom, and still you will find no *reason* for your belief in the uniformity of nature, which all your inferences suppose ; and if your belief be not rational, it must be instinctive. To doubt of this uniformity seems indeed monstrous, it shocks us extremely, not only because it is opposed to instinct, but also to Custom ; for though the belief begins with instinct, it is afterwards so fortified by custom that doubt becomes next to impossible. When similar phenomena have been observed to recur in similar circumstances over and over again, a habit is formed of expecting one phenomenon as soon as another appears, a habit which becomes irresistible, which precludes all doubt, silences all objections, and makes us stare at the man who would interrupt it, as one would at a madman or a fool. But Instinct and Custom or Association are here the sources of our belief, and the man who is bold enough to oppose these is thought to oppose reason.

4. It is to this force of custom, and not to reason, that we ought to attribute many of those actions of the lower animals which appear rational. Animals can be taught many things. The pointer dog is taught to drop after

fire, not to bark, not to chase hares and rabbits, all contrary to his nature ; but is reason his teacher ? To explain the result we need not call in so lofty a faculty, for a lower one will suffice. The dog has memory, for without that he could learn nothing, and he can remember the flogging which followed any transgression of the rules of sporting, at least after several repetitions of the offence and punishment, till the one becomes indissolubly associated with the other, and every new occasion of misconduct suggests the former penalty. In this there is no necessity for Reasoning, or even for Reason at all, since mere association of a certain action with pain, founded on memory, will account for the phenomena. When I put on my hat, and take up my stick, my dog leaps up for joy, because these acts are associated in his mind with going out, in which he delights.

5. That the lower animals should be so much led by Custom need not surprise us, when we know that man himself is subject to the same influence. In him, no doubt, it is counterbalanced by Reason, more or less in particular instances, but the force of custom though weakened is never destroyed. Reason and custom are always at war, and sometimes the one gains the mastery, sometimes the other. In the unthinking, the latter of course bears sway ; in reflecting minds, the former has greater, but not undivided, influence. No one knows how much he is led by custom. Custom may have originated in Reason, but in the course of time the reason is often forgotten while the custom still remains. Thus, the annual promenade along the *Champs Elysées* to the *Bois de Boulogne*, in Passion week, arose out of a reli-

gious procession to the convent of Longchamp ; and the promenade remains, though any religious, or indeed any idea whatsoever connected with it, has totally vanished. At present, the promenade is senseless, but it continues. Hallowe'en is still observed in Scotland, though, as the vigil of All Saints' day, it is quite forgotten ; but were it remembered as such, it no doubt would excite the pious indignation of Presbyterians. Burns has written a poem on Hallowe'en, but certainly no religious idea connected with it can there be discovered. The year in Scotland is still divided by four terms, known as Candlemas, Whitsuntide, Lammas, and Martinmas ; though the procession of the candles is now only seen in St Peter's, and the Descent of the Holy Ghost, the Assumption of the Blessed Virgin, and the Feast of St Martin, are blotted out of the Presbyterian calendar.

6. Affection to a ruling dynasty, so important a political element, often denied and ridiculed by superficial declaimers, liable no doubt to excess and misdirection, but, on the whole, most beneficial ; the source of internal peace, of security, and hence of lenity in the prince, of repose in the people, of present prosperity and future progress, is owing almost entirely to Custom. The people are attached to a dynasty not because it is good to be so attached, not from Reason, but because the dynasty is old. For the same cause do they respect old families, families whom they and their fathers have been accustomed to see in high place, to look up to, and to love. No doubt respect for old families depends also upon respect for continuity, for continuity supposes some virtue, some moral excellence. Wealth possessed by the

same family for many generations certainly argues something in its favour. The privileges of primogeniture may or may not be wise, but where they have long been established, they are fondly cherished by all, even by those who seem to lose by them. Few younger sons in Great Britain would have the right of the elder abolished. And what a hold on our reverence has the supposed continuity of the clerical line from Christ to the existing ministry through the Apostles!

7. The powerful influence of Custom on both our opinions and actions being a fact indisputable, generally allowed, though not to the full extent, it will the more readily be admitted as probable that many conclusions supposed to be reached by Reasoning are really owing to Instinct fortified by Custom. Our every day inferences regarding matters of fact cannot surely be traced to Reasoning. What reasoning is required to believe, or what reasoning could prove that fire will always burn, water drown, or that the sun will rise and set to-morrow? In these and innumerable such instances, there is manifestly no occasion for reasoning, and no grounds for it, because uniformity in time past, were it ever so perfect, and ever so well known, could never prove uniformity in time to come. And reasoning is here not only impracticable but unnecessary, for we believe, and firmly believe such uniformity long before we can reason. But all inferences from experience, however remote, however different from ordinary facts, were founded on the same blind belief, common to the clown and the philosopher, and, therefore, their basis, at least, is not Reasoning, nor any form of Reason.

8. If this doctrine be correct, if our belief in the uniformity of nature be founded not on Reason but on Instinct fortified by Custom, then can our disbelief in exceptions to this uniformity have no other foundation than this, that we are *unaccustomed* to them. Few have the presumption to deny the *possibility* of such exceptions, or of miracles, thus arrogating to themselves an intimate acquaintance with the secrets of nature; but the extreme improbability of exceptions is maintained by many, an improbability, according to Hume, as good as a demonstration. That philosopher was the first, however, to broach the opinion that all our inferences from experience are based on Custom, not on Reasoning, or more properly, are not instances of reasoning, not based upon Reason, and, consequently, our Belief in Uniformity, and disbelief in want of Uniformity, or in miracles, rest, according to him, on Custom alone. If then, as Hume asserts, the argument against miracles from the invariable course of nature, be "as entire as any argument from experience can possibly be imagined," let us remember that the argument, allowing it entitled to the name, rests entirely upon Custom, according to him, upon Instinct afterwards fortified by Custom, according to us, not upon Reason. Custom, or Instinct and Custom together, are the causes, the metaphysical causes of our Belief or our disbelief, but they are not logical causes or reasons which justify such belief or disbelief. Powerful causes no doubt they are, and influence us they always will; but, being independent of Reason, they cannot, without prejudice, be brought to silence all arguments derived from that higher faculty.

It is necessary to insist upon this power of Custom. So strong is it, so insidious, so little known to ourselves, that any deviation from Uniformity appears to us monstrous, and all belief in want of uniformity seems opposed to common sense, that is, to common Reason. We shall admit, with difficulty that Reason is here not concerned, that the mind is shocked, not by a violation of rational thought, but by a breach of what is usual. Thus is Custom mistaken for Reason, and receives that homage due only to a higher power.

9. Innumerable answers have appeared to Hume's famous Essay on Miracles, but hitherto the true philosophical answer has never, I believe, been given. He is refuted on his own principles; and those principles, with the modification above suggested, seem to me sound. If all our inferences from Experience be founded on Custom alone, or on Instinct fortified by Custom, then these inferences are not founded on Reason; and therefore cannot be brought forward as arguments, much less as infallible arguments, against any rational conclusion. Our incredulity to miracles depends then not on Reason, but on the interruption to what is usual; and our Belief in the same is opposed, not to the rational faculty, but to the power of Custom. Properly speaking, we have no reason to give against miracles; but we believe them with difficulty because they are unusual. The argument of Hume, then, thoroughly probed, amounts only to this, not that our experience of the laws of nature, were it even hitherto unalterable, as he assumes, is any argument, much less an unanswerable argument, against an occasional violation of those laws, of the secret causes of

which we know nothing ; but only, that the great uniformity hitherto observed forces us to believe in continued uniformity. The cause, the metaphysical cause, of our Belief or Disbelief, is here truly stated, but that cause is not a logical one, not a Reason. This seems the true answer to Hume's Essay, and its importance cannot be over-rated. As St Paul said to King Agrippa, "Why should it be thought a thing incredible with you, that God should raise the dead?" It was incredible, simply because unusual, not irrational.

These observations will enable us to determine what is to be thought of those who deny the *possibility* of miracles ; possibility "of any modifications whatever in the existing condition of material agents, unless through the invariable operation of a series of eternally-impressed consequences following in some necessary chain of orderly connection." ¹ Well might Hamlet say to such,

" There are more things in heaven and earth, Horatio,
Than are dreamt of in your philosophy."

That a creature like man, with intelligence enough in some degree to appreciate the wonders of creation, enough to see how very little he does know, or is ever likely to know, how inexplicable ever thing ultimately is, should presume to talk of the *impossibility* of any change in the ordinary course of nature, shows a degree of ignorance and presumption, ludicrous, if not pitiable. Before pronouncing, dogmatically, on this point, man must be as God, he must know all, the first springs or principles of everything. Religious dogmatism may be excused, when built upon any believed revelation, and though not

¹ Oxford "Essays and Reviews." 1860. Essay III.

shared it may meet with sympathy, for in religion all doubt is distressing; but irreligious dogmatism has no excuse, either in Philosophy or in Sentiment.

10. What are we then to think of *Inductive Reasoning* commonly so called? Is this a misnomer, or is it not? It is quite certain, and indeed is generally admitted, that a great part of the process which goes under the name of Induction, is unconnected with Reasoning proper. First there is the observation of facts, facts of Co-existence or of Succession; then the scrutiny of these facts, in order to determine whether there be any constant, or only a casual co-existence or succession; next comes the separation of the variable from the invariable elements, for there are always some of the former; and the latter being ascertained, there is really nothing else to do. No doubt, we infer from thence that what has hitherto been invariable will so continue; but no reasoning is required for this, no effort of mind whatever, scarcely an act of consciousness, so rapid, so unavoidable is the consequence. If past uniformity be established, we want nothing more, and we should be surprised if any one should suppose anything more to be required; not that uniformity in future is really proved, but that no proof is thought to be necessary. And no proof is thought to be necessary because an Instinct of our nature prevents all doubt. We should as soon doubt the existence of the material world, as that past uniformity should not be reproduced. We must conclude, then, that in Induction there is no place for Reasoning, properly so called, and that the attempt to bring it into logical form by supplying, in all cases, a Major Premiss, such as "Nature

is uniform in her operations," or some one similar, is only one of the many instances where nature has been sacrificed to the spirit of system, to the love of regularity. Nature is uniform in her operations. But there is a great deal of variety as well as of uniformity in nature, and this general proposition tells us not where to expect the one, and where the other. Nothing can be more vague and undefined, and consequently nothing less fitted for a Logical Premiss. Because there is a great deal of uniformity in nature, no one can thence infer that there will be uniformity in any particular case. As a logical Premiss, therefore, the proposition is useless.

This mistake bears some resemblance to that whereby General Axioms were considered as the foundation of Mathematical reasoning. Particular cases of axiomatic truths must have been discerned before the general axiom was formed, and these are sufficient for the reasoning, which need not wait till axioms be framed to establish its validity; and so, conjunctions of phenomena were observed over and over again, and on *that account alone* expected in future, long before any general propositions relative to uniformity were framed, and consequently without any reference to such a proposition. These propositions, like the axioms of Mathematics, are digests of our knowledge, convenient formulæ in which much previous knowledge is summed up, not the ground of our knowledge.

It is generally allowed that there are few finer specimens of *a posteriori* reasoning than Butler's Analogy. But to what does this reasoning amount? The whole object of the writer is to trace a similarity between the

doctrines of Natural Religion and the constitution and course of Nature; and again between the doctrines of Revealed and those of Natural Religion. These two similarities being established, the whole case is made out. No Reasoning is required to prove from thence that the Author of Nature is the God of Nature, as well of Revealed Religion. This conclusion is no doubt irresistible, but it is not arrived at by reasoning. A sort of logical form might no doubt be given, as this—

Like Effects spring from like Causes;

The doctrines of Natural and Revealed Religion are like to each other, and to the constitution and course of Nature; they are all like effects; therefore they had all the same cause or AUTHOR. This argument, however, such as it is, is of no avail, is of no logical value; for the words *like* or *similar*, are too vague to admit of any legitimate inference. Likeness admits of innumerable degrees. But there is a degree of likeness in the effect from which we infer without hesitation likeness in the cause; though the inference is not logical. The attempt, then, to rest an Inductive conclusion on Premises such as these, tends to diminish rather than to increase their certainty.

11. Though, in Induction, Reasoning, properly so called, does not come into play, yet, in difficult cases, the highest powers of Reason are required. In simple and every-day cases of inference from experience, Reason is scarcely, if at all necessary; the natural tendency guided and strengthened by Custom suffices. Thus animals, possibly not devoid of Reasoning, though certainly possessing it in a very small degree as compared with man,

are quick enough to avoid impending danger, Still, no animal but man is capable of patient and long-continued Induction. Here, not only high intellectual, but also rare moral qualities are necessary ; keenness of discrimination, a clear insight into the fundamental elements of a sequence, patience and dexterity in making experiments, no impatience of doubt, but long forbearance in coming to a conclusion. In all this, the only difficulty is to determine what is, and what is not invariable ; and for this purpose many rules and canons have been drawn up, especially by Bacon, in the second part of the *Novum Organum*, by Dr Whewell in his *Philosophy of the Inductive Sciences*, and by Mr Mill in the inductive portion of his work on *Logic*. These are quite different from the common rules of *Logic*, which do not depend at all upon experience, but are necessary laws of thought, laws which bring their own evidence along with them, the proof of which is within and not without. If, then, we still talk of Inductive *Logic*, we must remember that the term *Logic* is here used in a far wider sense than that of pure *Logic* or *Logic* proper, that it must comprehend all science which professes to direct the understanding in the pursuit of Truth, a scope far beyond that of *Logic* proper, which aims not at Truth directly, but only at consistency. Pure *Logic* is *unique*, its limits are narrow but definite ; while that *Logic*, which would embrace Induction, is vast, but of uncertain boundary. The former demands no original knowledge, only natural subtlety ; while Induction rests upon facts learnt by experience, and the more the better. The best reasoner will be the best logician, however false his conclusions ;

but if conclusions be false, Induction must be bad. If the premises be false, or, though not utterly false, partial, the finest reasoning will lead to error; nay, if the reasoning be faultless, error is inevitable; but good Induction must lead to truth. Good Induction consists in observing a sufficient number of facts, and in thoroughly sifting them, in order to discover what in these facts is casual and what invariable; and that ascertained, there is no occasion for reasoning; for we believe instinctively that the future will be like the past, that like causes will be followed by like effects, and that like effects will indicate like causes.

The pure logician may be the most ignorant of men, though very subtle; but the Inductive Philosopher must be informed, though not an acute reasoner. There were no more subtle reasoners than the Schoolmen, though they knew nothing; but the followers of Bacon have observed much, and reasoned little. Pure Logic is an admirable mental exercise, though liable to abuse and often barren, while induction is fruitful in results, but of less value as a whetstone to the intellect. There is the same difference between them as between Geometry and Analytics; the former is the more improving, the latter the more manageable and expeditious,—the one makes acute mathematicians, the other determines the Mechanism of the Heavens. The doctrine of proportion affords an excellent example of the two processes. The fifth Book of Euclid, which treats of proportion, is lengthy, difficult, and laborious, but on that very account an excellent exercise; while the same truths may be reached

Analytically, shortly, easily, and quickly, and therefore, to the mind, unprofitably.

12. There seems to be a natural antagonism between Observers and Reasoners. The former stigmatize the latter as theorists, system-builders, dreamers, perhaps metaphysicians; while these hurl back upon their adversaries the names of dull plodders and laborious pioneers, useful perhaps in their way, but of slow parts, and no originality. The one upholds the mind itself and its processes, as chiefly, if not alone worthy of regard; he boldly proclaims, that, "In nature there is nothing great but Man, in man nothing great but Mind;" he looks to individual development of intellect rather than to the general and material result, to search after truth rather than to truth itself; nay, he may consider our *masters* of modern science, with all their acquirements, no better, for the most part, than "intellectual barbarians," when compared with Aristotle or Plato.¹ The other points to results; he shows the progress of Physical Science, the numerous applications thereof to the wants of men, the diffusion of comfort, the increase of power over nature, and these, he exclaims, are my doing. While you were syllogizing, while you were straw-splitting, while you were reasoning yourselves out of every thing, and at last confessing that "nought is everything, and every thing is nought," I was laboriously, painfully, and perseveringly observing and experimenting, and I, accordingly, have reaped a rich harvest, while you were reaping the winds. While you were doubting about the existence

¹ See Sir William Hamilton's "Discussions on Philosophy." Art. II. p. 39.

of matter, I moulded it to my wishes ; and while you called in question the things near and around us, I discovered other worlds, and made known the system of the universe. Such is the contrast, such the disagreement between Reasoning and Observation, a contrast which will never end, because it is founded in nature, and neither side can ever be destroyed, neither antagonist ever silenced.

13. This doctrine, that there is no such thing, properly speaking, as Inductive Reasoning, may be new, and therefore it will be attacked, and if it cannot be strictly refuted, it may still be depreciated as a mere play upon words. But underneath the question of words lies one of things, the question whether Induction embrace any mental process so similar to other reasoning as to be properly called by the same name, for names would be utterly useless did they not stand for things similar. This is a real psychological question, and according as it is determined, the name will or not be given.

14. Mr Mill's System of Logic embraces two parts, the Ratiocinative and the Inductive ; whence it ought to follow that Induction is not ratiocination,—is not a process of reasoning. Though this be true, and Induction is not reasoning, does not contain reasoning, yet it may be the foundation of reasoning ; for, from the general facts or general principles arrived at by Induction, reasonings may follow. And, no doubt, from this mixture, the opinion has been derived that Induction itself is a reasoning process. These general facts or principles, when allowed, may serve as the foundation of an argument as well as an Intuitive Truth ; but, however cogent the

argument, the conclusion can never be more sure than the principle from which it is deduced.

15. Though Experience be at the bottom of these rational inferences, as well as of those wholly emanating from experience, yet the difference between them in the evidence may be great. Thus, when we infer that all ruminating animals have cloven feet, because all hitherto observed have them, we draw an inference from experience, directly and instinctively, which commands considerable belief; but could we show that, according to principles long and well established, the one was connected with the other, we should be thoroughly convinced. The one conclusion is purely empirical, the other rational, though based upon experience. It is thus that the great Cuvier was able to determine rationally the habits of many extinct species of animals. A certain form of bone proves a certain form of muscle, and a certain form and size of muscle prove that the animal was carnivorous and savage, or graminivorous and mild. In the practice of medicine those whose rule is direct experience only are stigmatized as *Empirics*, in opposition to such as reason from general principles which arose out of long experience. Thus, Induction and Reasoning, though different, and often cultivated pretty exclusively by different persons, are real auxiliaries and friends the one to the other.

16. How indistinctly this doctrine as to the non-reasoning nature of Induction has hitherto been seen by philosophers, appears from the inconsistency of their language on the subject. For while, at one time, they assert that inferences from experience are not "effects of reasoning,"

or, are not "founded upon reasoning," they, at another, talk of experimental or inductive as a branch of probable reasoning. No one ever saw more clearly than Hume that conclusions from experience were not founded on reasoning. "I say then, that even after we have experience of the operation of cause or effect, our conclusions from that experience are *not* founded on reasoning, or any process of the understanding."—"These two propositions are far from being the same, *I have found that such an object has always been attended with such an effect, and I foresee that other objects which are in appearance similar will be attended with similar effects.* I shall allow, if you please, that the one proposition may be justly inferred from the other : I know, in fact, that it is always inferred. But if you insist, that the inference is made by a chain of reasoning, I desire you to produce that reasoning. The connection between these propositions is not intuitive. There is required a medium which may enable the mind to draw such an inference, if indeed it be drawn by reasoning and argument. What this medium is, I must confess, passes my comprehension ; and it is incumbent on those to produce it who assert that it really exists, and is the origin of all our conclusions concerning matter of fact."¹ Nothing can be more explicit than this language, yet the "Treatise of Human Nature" by the same author, is designated as "An attempt to introduce the experimental Method of Reasoning into Moral subjects." This, it may be said, was a juvenile work, afterwards disowned by the Author ; but the same uncertainty, the same contradiction, which

¹ Hume's Essays : *Sceptical Doubts*.

appears on this subject in Part III. Sect. XVI., of the "Treatise of Human Nature," reappears in the corresponding Section IX. of the Essays, "Of the Reasoning of Animals." In the following sentence, the contradiction comes out in bold relief. "But our wonder will, perhaps, cease or diminish when we consider that the experimental reasoning itself which we possess in common with beasts, and on which the whole conduct of life depends, is nothing but a species of instinct or mechanical power that acts in us unknown to ourselves, and in its chief operations is not directed by any such relations or comparisons of ideas as are the proper objects of our intellectual faculties." Here what was *reasoning* at the opening of the sentence becomes *instinct* before the close. Mr Bailey, in his able work, "The Theory of Reasoning," divides all reasoning into the *Demonstrative* and the *Contingent*, meaning by the latter *Inductive*, which, as he suggests, might also be called *Instinctive*, as opposed to the *Intuitive*. Here, again, the error of the common opinion with respect to Induction comes prominently forward, for that error leads to the inconsistency of coupling together Instinct and Reasoning, which are perfectly distinct, and cannot amalgamate.

17. Having exposed the errors and inconsistencies of others, I shall not conceal my own. In the "Principles of Psychology" I started the question, "If these inferences from experience be not reasoning, why do we talk of Inductive Reasoning at all?"¹ and this question I answered by endeavouring to show that "in simple cases

¹ Chap. x. P. 85.

of inferences from experience, the natural tendency to associate phenomena once found in conjunction requires little guidance, while, in the more complicated, judgment and reasoning are necessary." At the same time, I pointed out the radical difference between Inductive Reasoning and the other, and called the one set of inferences *non-intuitive*, the other *intuitive*. But the mistake lay in supposing that non-intuitive inferences could ever be Reasoning. The simple statement is a contradiction; for Reasoning is essentially *intuitive*. Some inferences from experience are made without deliberation, without hesitation, nay, without consciousness that they are inferences; while others are not drawn till after long observation and examination, many difficulties suggested, and doubts arisen and dispelled: but in neither case is the conclusion drawn by Reasoning. The difference is, that, in the former case we entertain no doubt of past invariability, in the latter much doubt; but remove this doubt, and the inference follows immediately in both cases. Was the Law of Gravitation discovered by Reasoning, or with the aid of Reasoning? By no means. From a simple occurrence, the fall of an apple, as commonly said, the idea first entered into the mind of Newton, and this idea was afterwards confirmed by long observation, that so it had always been and now was; and this once settled, though no reasoning could prove, none was required to prove, that so it ever would be.

18. That all Reasoning, properly so called, is *a priori*, is proved from the very nature of Logic, pure Logic, which treats of Reasoning, and which is an *a priori* science requiring no knowledge foreign to the mind itself,

only an intuition of consistency in thinking, no knowledge of the world without, its constitution or its course. It is only by an extension of the term beyond its proper limits that we talk of Inductive Logic, and, by the same extension, of Inductive Reasoning. But this similarity of name must not lead us to confound things, in spite of some resemblance, very different in reality, pure or Ratiocinative, and applied or Inductive Logic; *a priori* or Deductive, and *a posteriori* or Inductive Reasoning.

19. It has long been supposed that Man is peculiarly distinguished from the lower animals by the faculty of REASON—that this is the *differentia* whereby the species is separated from the other species of the GENUS ANIMAL; that man, in short, according to the old definition, is ANIMAL *rationale*. But it would be hard to prove that all other animals are destitute of Reason, and it seems improper to adopt as a characteristic what is at least doubtful. It is more correct to say that man is a *Reasoning* ANIMAL. As far as we know, Reasoning is, indeed, peculiar to man. We cannot believe that other animals are capable of reasoning; and we must suppose that God is above it, that he discovers at once by simple Intuition, without reasoning, truth from error. Reasoning, then, seems to be characteristic of such a being as man, “a little lower than the angels,” yet far above the brute creation; immeasurably inferior to Deity, yet made in the image of God and “crowned with glory and honour.” The very uncertainty of reasoning is characteristic. The instincts of animals are invariable, unerring; the wisdom of God is so likewise. Man alone is reasoning and fallible. On every question, except ques-

tions of quantity, different sides may be taken, and each may be supported by ingenious, if not powerful arguments, proving both the force of Reason and the uncertainty of Reasoning. How brightly does Reason shine in the reasonings of conflicting barristers, though on one side or the other they are fallacious !

20. The very perfection and triumph of Reasoning is Mathematics. In pure mathematics, by reasoning alone, without any knowledge of the universe and its laws, in complete ignorance of the facts of common life, and of everything around and without us, we arrive at innumerable and irresistible conclusions ; and in mixed mathematics, on a foundation of facts known by experience, and assumed to be true universally, we build a vast superstructure of demonstrated inferences relative to the material world in which we live, and to the system of the universe. Here, then, we have reasoning in perfection, and the results are truly imposing, sure, as well as useful. Is, then, Mathematics our best instructor, the safest nurse and tutor of our Reason ? This by no means follows. As a specimen of reasoning it is perfect, but on that very account it is a treacherous guide. It accustoms us to think that questions are to be determined by reasoning alone, and by reasoning in one line alone, for in mathematics there is but one ; whereas all other subjects can be viewed on many sides, and admit of many and diverging lines of argument. The tendency of Mathematics, then, is to narrow the mind, to improve the power of ratiocination no doubt, but to destroy comprehensiveness, and so to unfit the Reason for the settlement of nice and complicated questions where much is

to be said on both sides. The exclusive cultivation of a science which admits of no doubt, no balancing of arguments, cannot be the best preparation for the affairs of common life, or even for other sciences abounding in difficulties and subtle distinctions. What more opposed than Mathematics and Law? In the mechanical arts, improvements in implements and machinery make less skill in the workman necessary; and, in like manner, improvements in the language and method of reasoning diminish the necessary acuteness of the reasoner. Thus, Analytics is a much more powerful instrument, but a less intellectual exercise, than Geometry.

21. Logic, pure Logic, that of the schools, for instance, so independent of information, so barren of results, was the finest whetstone of the reasoning powers, gave the keenest edge to the weapons of controversy; though these weapons were often employed only in splitting straws. Never was the saying of Molière more applicable—

Raisonner est l'emploi de toute ma maison,
Et le Raisonnement en bannit la raison;

a *jeu d'esprit* containing a profound truth, the possible divorce, or at least the temporary separation, of Reason and Reasoning.

22. Very different is Induction. There, as we have seen, the reasoning process is *nil*, but the results grand and fruitful, full of physical discoveries and material application. In the original inquirer, Induction must call into play some of the highest qualities of mind, rare powers of Reason, though not of reasoning; but in the learner, Induction, while it informs, does not greatly improve the intellect. He acquires a knowledge of facts,

no doubt, facts of the highest interest and importance, but he learns these facts too easily, with too little effort of his own. His head may be crammed with knowledge, while the higher powers of mind are little exerted. He may be a walking Cyclopædia, but incapable of solving any original problem, of settling any disputed question. Physical Science, therefore, which rests upon Induction, cannot be the best means of education.

23. Upon the whole, it appears that the sciences most fertile in results, as Analytical Mathematics and the Inductive Sciences, afford the least training to the intellect, to the reasoning powers especially; while those more barren of fruit, as Geometry and Logic, give the best intellectual exercise. Metaphysics or Psychology is probably the best training of all, for it requires the subtlety of logic, combined with a greater compass of thought.

CHAPTER IV.

OF THE REASON OF ANIMALS.

1. That animals possess Instinct is universally allowed ; that they are endowed with Reason is generally denied. In order to answer the question whether animals possess Reason, we must first agree as to the meaning of the term *Reason*, and afterwards we may determine whether the lower animals be endowed with it or not.

2. In chapter first, Par. 7 of this Part II., we arrived at the conclusion that “ Comprehension of Relation, and Intuition as to the agreement or disagreement, whether of Notion with Notion, of Thing with Thing, or of Relation with Relation,” was the whole of Reason ; that Comprehension alone might be called *Reason in embryo* ; and when united to Intuition, *the perfect plant*.

3. That animals soon come to know the common consequences of things around them, that they avoid fire and other dangers, there is no doubt ; and, therefore, they must draw inferences from experience, general inferences for their conduct in particular cases. All this, however, as we have seen in the instance of man, they can do merely by Instinct, the instinctive tendency to associate phenomena once conjoined, a tendency afterwards confirmed by Custom. So, the various accomplishments and tricks acquired by dogs and other animals, particularly

pointer and shepherd dogs, may be traced to custom alone. In all this there is no place, no occasion for Reason.

4. The essence of Reason is Intuition, or the power of distinguishing one thing from another. But Reason is not required for every distinction, for distinguishing, for instance, between our Perceptions, for even the mad and the fatuous have that power. The madman runs into danger on purpose to destroy himself, not because he is ignorant of the danger, and the feeblest intellect will not confound a man with a horse. So, no Reason is required in animals to enable them to distinguish one object of perception from another.

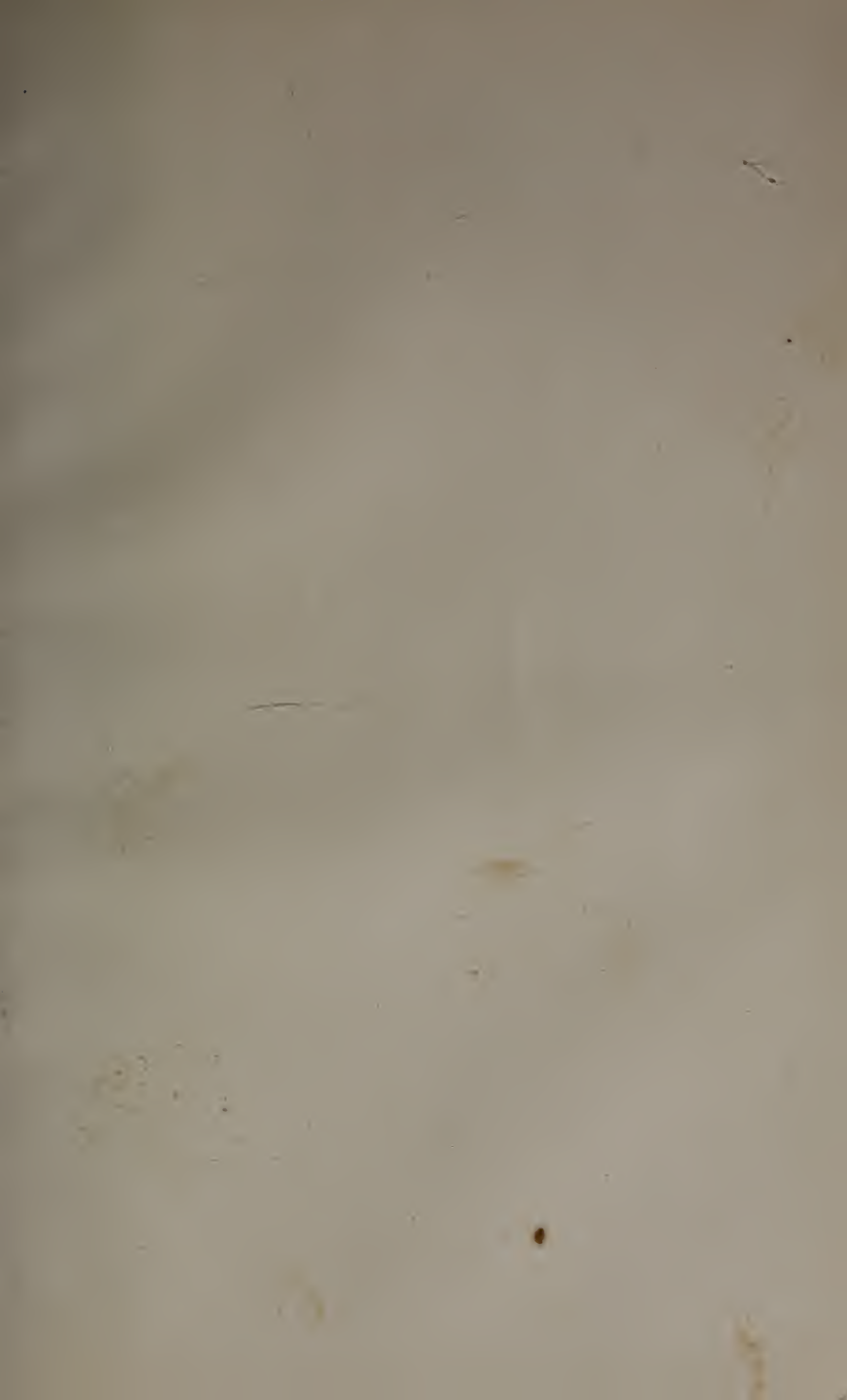
5. Animals, undoubtedly, have Memory, but Memory is independent of Reason, and they may have Imagination, as in their dreams, but this alone is not a function of Reason. It is an intellectual, but not a rational faculty. Animals must also generalize to a certain extent, or they could learn nothing from experience; but this degree of generalization, confined to objects of perception, requires no effort of mind, no exercise of reason. It is, like Perception itself, unavoidable. If, then, all these powers, undoubtedly possessed by animals, may exist without Reason, and are sufficient for them, why confer upon them this noble faculty?

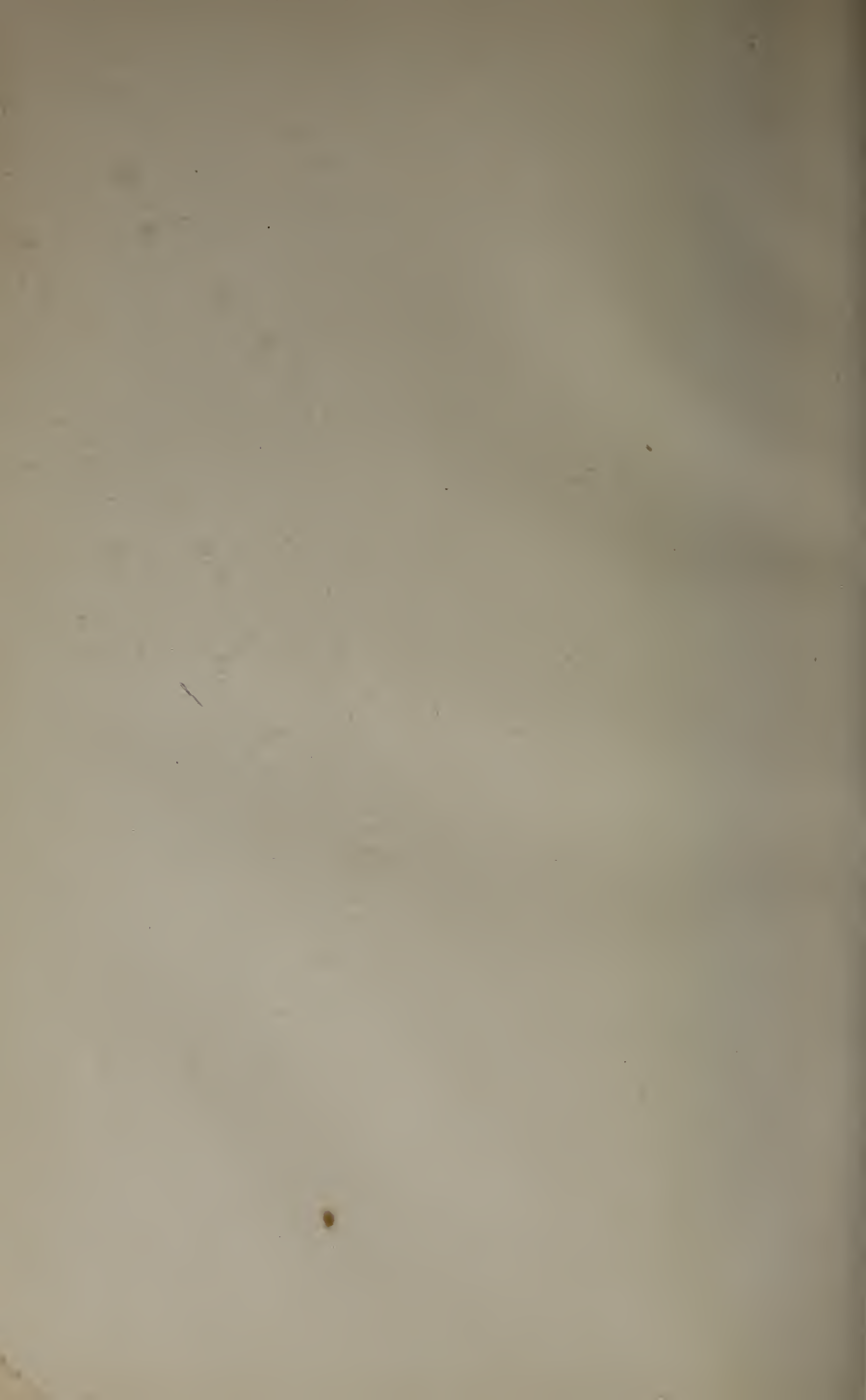
6. Can it be shewn that animals are capable of comprehending any proposition the least abstract? Can they even conceive any *abstract* idea, any abstract idea of number, for instance? *General* ideas of Objects of Perception sufficient to distinguish a man from a horse, a dog from a cat, we allow that they possess; but of

abstract ideas they seem to have none ; much less can they comprehend the relations of those ideas, or any proposition formed concerning them. They can certainly comprehend that one object of present perception is larger than another, so that one fence, for instance, can be leapt with ease, another not, that a smaller animal may be attacked with impunity, another with risk ; but their comprehension seems limited to what is immediately in presence, and extends not to the distant or the abstract. And if the power of comprehension, which we have called *Reason in embryo*, be in them so low, how can we look for Reason in its higher development ?

7. At the same time, the above examples suffice to shew a *faint glimmering* of Reason, enough for the condition of animals ; for the horse, when he takes one fence and declines another beyond his power, evinces a slight degree of judgment, as also the dog when he pounces upon a rat but avoids a badger. This, then, seems to be the most which we can accord to animals, Comprehension of the difference between one object of Perception and another, and a judgment founded thereon which regulates their conduct. Should we see a small dog attack a large one, we would naturally say, *What a fool he is*, shewing that we believe the species to be capable of some reason ; for where there is no reason there can be no folly.

THE END.





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